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**Stakeholder Participation in Water Resources  
Management:  
The Case of Densu Basin in Ghana**

Nana Amma Anokye

Cover designed by Yvonne Yankey

VRIJE UNIVERSITEIT

Stakeholder Participation in Water Resources Management:  
The Case of Densu Basin in Ghana

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op gezag van de rector magnificus  
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door

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geboren te Accra, Ghana

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## **Executive Summary**

### **Problem definition**

Many scholars and policymakers argue that exclusive governance is problematic. This is because it does not meet people's needs, it ignores local realities and it disempowers people. The problem of exclusive governance is also felt in the water sector. The water crisis that is confronting some regions in the world is attributed to poor water governance. The international community has placed emphasis on Integrated Water Resources Management (IWRM) as a model to address the poor water governance problem. One of the key principles of IWRM is a participatory approach to water resource management.

Stakeholder participation, it is argued, has many theoretical advantages in the water field. However, most interventions to apply IWRM have concentrated on the functioning of the legal and regulatory systems and ignored the people. In addition, research on the issue of potential benefits of stakeholder participation in water resources management in the developing world is relatively limited compared to the developed world. Can the anticipated benefits be achieved in developing countries like Ghana considering their different socio-economic and technological contexts? This thesis examines the situation of stakeholder participation in Ghana, and aims at contributing to a better understanding of the challenges that confront the participatory processes in water resources management in the Ghanaian context and in the Densu Basin in particular.

### **Research questions**

This thesis addresses the following research questions:

- 1) How does stakeholder participation influence water resources management?
- 2) How has stakeholder participation been interpreted in the policies and laws and applied in Ghana?
- 3) How intensive is stakeholder participation in the decision-making and implementation processes of water resources management activities in the Densu Basin in Ghana?
- 4) How can participatory processes be improved in the management of water resources?

### **Methodology**

The thesis combines an extensive literature survey on stakeholder participation, a content analysis of official reports and documents and a layered case study methodology. Primary data was sourced through individual and key informant interviews with relevant actors at the national, basin and community levels from governmental and non-governmental organisations (NGOs). Focus group discussions were held with traditional rulers and community-based organisations (CBOs). In all 123 individual interviews and 26 group interviews were carried out.

### **Literature review**

The literature review on stakeholder participation (Chapter 2) shows that stakeholder participation has a role in development policymaking and implementation. It appeals to policymakers and scientists because it can be used to achieve the triple goals of good governance, democracy and sustainable development. However, critics argue that there are weaknesses in its application such as: a) over representation of some groups; b)

exclusion of some groups; c) likelihood of conflict among participants; d) time intensive and expensive; e) poor procedures for taking diverse views into account; and f) the diversity of intensity of involving stakeholders in decision making processes referred to as the ladder of stakeholder participation in the literature.

The ladder of participation reflects the gradation of the intensity of stakeholder participation. The upper levels are related to intensive stakeholder participation, which is associated with effective participation. Effective stakeholder participation requires (a) accountability; (b) transparency; (c) inclusiveness; (d) fairness (equity); (e) legitimacy; and (f) a process by which stakeholder positions are incorporated into decision-making. Such participation has empowering outcomes. Collective action operates at a high level of stakeholder participation.

There are two main approaches to stakeholder participation. The transformative approach is associated with intensive participation. This approach enhances socio-political and/or the economic empowerment of the individual or the community. The instrumental approach is where participation is used as a tool for achieving predetermined objectives or better policy outcomes; this usually does not empower individuals.

Below intensive participation on the participation ladder is the 'less intensive participation' level which is associated with the transformative-instrumental mix approach to stakeholder participation. Further down the ladder is tokenism and then mis-participation. Instrumental approaches are employed at these levels and these do not empower stakeholders.

Following an examination of the theory of participation, Chapter 3 examines the practice of participation as reflected in the literature on how the concept of stakeholder participation is interpreted and applied in developing countries. The literature shows that (i) interpretation of stakeholder participation varies depending on the objective of the project or intervention. (ii) Stakeholder participation has been applied in areas with a decentralised governance system and through local water agencies in water supply. (iii) Socio-cultural, economic, and developmental factors determine the extent to which the benefits of stakeholder participation in the water sector are achieved.

Success stories were reported where stakeholders were informed and consulted in the early stages of projects. Application difficulties were associated with inadequate human and financial resources and the neglect of local knowledge input by implementers.

### **Ghana case**

Chapter 4 assesses the policy on stakeholder participation and decentralisation in Ghana. It shows that since 1988 there has been a decentralisation trend. The adoption of the decentralisation policy has been influenced by the development thinking of the period; the political agenda of the ruling government (in the 1980s) in building the rural power base; and stabilising a political system in crisis.

The policy on stakeholder participation at the local level in Ghana is inherent in the laws governing decentralised development planning and laws about local government where the District Assemblies are the principal units. Stakeholder participation in the water sector is embodied in the national water policy and other laws in the water sector.

The decentralisation policy is to give local people the opportunity to participate effectively in their governance to ensure accountability. However, there are challenges:

First, there is a democratic deficit - the appointment of 30% of District Assembly (DA) members and the District Chief Executive by the central government encourages upward accountability and less of downward accountability to the local electorates. Second, there is incomplete decentralisation - (i) recruitment of personnel and payment of salaries at the decentralised departments are done in Accra (headquarters); creating problems of disloyalty to the DAs by these departments. (ii) Development planning and budgetary decisions hinge on governmental approval. (iii) The requirements of the DAs Common Fund also constrain the DAs on how to invest the funds. (iv) Many of the sub-district structures are not functioning and participation of stakeholders at the sub-district level in development planning is at the level of tokenism on the participation ladder.

Chapter 5 assesses stakeholder participation in the water laws and policies in Ghana. The water laws and the national water policy of Ghana promote community, public and private sector participation in the management of water especially in the water delivery sub-sector. Stakeholder participation in water resources management at the national level is mainly about (a) developing policies and legislations, and provision of the necessary guidelines for various water uses; (b) policy implementation and monitoring; and (c) collaboration between government agencies in performing their functions.

The Water Resources Commission Act 540, 1996 enhances participation by broadening the stakeholder base in decision-making and planning of WRC's activities as well as in the discharge of its functions. However, the proportion of government agencies compared to civil society and private agencies serving on WRC's board is high, which is likely to bias decisions-making.

Chapter 6 examines stakeholder participation in water resource protection in the Densu Basin. It shows four distinct ways of initiating stakeholder participation: a) The stakeholders are induced to participate by some kind of incentives such as 'food-for-work' or payment for their labour. b) Stakeholders are persuaded to get involved in the participatory processes through awareness creation. c) Stakeholders are mandated to participate by traditional authorities. d) Stakeholder participation is through stakeholders' own initiatives upon recognising their needs. The first two do not lead to intensive stakeholder participation. The third one, participation by the traditional authorities is intensive. The fourth one involves intensive stakeholder participation as the stakeholders initiate the processes themselves: they make decisions, plan and control the activities.

At the basin level, the emphasis has been on methods that empower stakeholders to participate actively in decision-making with respect to the participation of government agencies. Participatory methods employed at the community level are such that some empower; others do not. NGOs and government agencies engage CBOs, community leaders and individuals in participatory processes using instrumental approaches. The level of such participation is tokenism.

Chapter 7 examines the effectiveness of stakeholder participation in the water delivery sub-sector in the Densu Basin. It shows that public-private partnership (PPP) was introduced in the urban water delivery system to ensure an effective and efficient water supply service. However, stakeholder participation was limited to the Ghana Water Company Limited and the private operator, Aqua Vitens Rand Limited. The public was only informed about decisions taken.

The rural water delivery programme is implemented at the lowest level by the DAs through the District Water and Sanitation Teams (DWSTs) and community water agencies. The degree of participation of these agencies is intensive because of their active involvement in the decision-making and implementation processes of the water delivery system. Both transformative and instrumental approaches are used. However, the programme relies heavily on external donor funds. These donors participate in policy dialogue and may influence policy and the projects.

The rural water delivery sub-sector has made the following achievements: (a) It has an extensive approach to participatory planning and community participation that encompasses (i) high levels of public accountability and empowerment; (ii) commitment at the local level; and (iii) sustainability of water facilities. (b) The democratic rights of communities are enhanced by having the power to select (i) members of water committees to represent them; and (ii) the most appropriate type of facility taking into consideration the cost involved; and the type that can offer them good services and can be easily maintained. (c) Water delivery has improved through community participation, ownership, and training of the water committees. (d) The training has resulted in the development of human capacity for decision-making at the very basic levels.

However, the rural water delivery programme faces challenges. (a) There is lack of competence at the local level in that the DWSTs lack the necessary technological capabilities to select and monitor the private contractors leading to reliance on the regional CWSA. (b) There is the challenge of motivating the voluntary Water and Sanitation (WATSAN) committee members in effectively performing their roles. (c) Some WATSAN committees are unable to reserve funds for the operation and maintenance (O&M) of water facilities. (d) The small and poor communities are unable to raise money for the five percent capital cost funding.

Chapter 8 discusses the influence of traditional governance systems and economic settings on stakeholder participation in the Densu Basin. It shows that traditional norms and institutions control the traditional governance system in the rural settings. The system is decentralised and has a hierarchical order of office holdings and related responsibilities. The traditional norms empower the traditional authorities to have influence and take most of the decisions in the communities.

The economic setting is such that the farmers and fishermen are motivated by their common interests and engage in collective activities that are important to their livelihoods. The farmers cooperate in participatory processes in their groups to gain access to irrigation water, which is their common interest. The fishermen also cooperate to make fishing in the Weija Lake possible and sustainable. The various groups participate intensively in the decision-making processes regarding the management of water resources for their livelihoods.

## **Conclusions**

Chapter 9 recalls the main goal of the thesis and the key findings. The participation literature shows several aspects of stakeholder participation. In the development discourse, emphasis of participation has shifted from provision of tangible inputs into implementation processes to contribution to decision and policymaking processes or power relations. Stakeholder participation is related to good governance, democracy,

sustainable development and decentralisation. Thus, stakeholder participation theoretically has the potential of improving the quality of decision and policymaking.

At the international level, experiences from other developing countries show that there is increased knowledge and skill development of stakeholders when they participate actively in activities involving people with diverse backgrounds. Generally, water resource management is influenced by stakeholder participation through the incorporation of local knowledge in decisions regarding resource management. There is development of effective and acceptable local strategies for water management, improved project implementation efficiency, and improved quality, accessibility and reliability of water delivery systems. Application problems of stakeholder participation in developing countries are associated with human and financial resources and neglect of local knowledge input. Ghana shares in these advantages as well as the application problem of resource constraint.

Stakeholder participation is interpreted in the decentralisation laws of Ghana as incorporation of the interests of the public in development planning through their representatives at the District Assemblies. However, the application of the decentralisation process in Ghana does not conform to the theoretical expectations in promoting participation at the local level as far as development planning is concerned.

The National Water Policy and the water laws provide for participation of all stakeholders in water management. At the national level, the composition of the decision-making body, WRC, is dominated by government agencies. Ghana is unable to broaden the scope of participants due to costs.

At the basin level, the river basin board, which is made up of mainly government agencies in the water sector, is in control of water resources management. The role played by the stakeholders in decision-making and implementation processes dictates the intensity of participation. Government agencies and NGOs initiate activities and prepare action plans.

The research shows that communities participate intensively in activities they identify themselves with. Besides the rural water delivery sub-sector there is no established formal platform for the local populations to participate in water management. Rather the local people form Community Based Organisations that serve as space for participation in activities regarding water resource management.

The traditional authorities are able to facilitate participation of the people in communal activities by the customary legitimacy accorded them. The people comply with rules set by chiefs to manage water resources under the traditional governance system in the rural areas.

The local people engage in collective actions that relate to economic activities, which they depend on for their livelihoods in the management of water resources. Therefore, if communities participate at the beginning of projects that target issues that have a bearing on livelihoods, participation is enhanced.

There are benefits emanating from the application of stakeholder participation in Ghana. (i) Water policy and IWRM plans for basins benefit from inputs from actors from different water use sectors. (ii) The demand-driven approach in the water delivery system imposes the responsibility to provide for the actual needs of stakeholders and



enhancement of the recovery of O&M cost of facilities. However, there are also problems associated with participation in Ghana. (i) The main challenge is that the practitioners – the NGOs and government agencies are not inclined to share power with stakeholders resulting in tokenism participation by communities. (ii) There is difficulty in having literate persons among local water agency members. (iii) There is a resource constraint in training or building capacities of DA, DWSTs, basin board and local water agents and to organise participatory activities.

This study provides a complex ladder of participation that integrates the different levels of stakeholder participation with different elements of stakeholder participation. This offers a framework, which can serve as a useful measure of participation based on the elements of participation. Second, application difficulties of stakeholder participation in developing countries like Ghana are associated with human and financial resources. Third, how decentralisation is interpreted dictates the intensity of stakeholder participation of local people in management of resources. Stakeholder participation is facilitated where the decentralised structures are functional and present sufficient avenues for dialogue and for the voice of the marginalised to be heard. Fourth, not all international discourses and policy prescriptions on water management may be appropriate for all countries. People in developing countries are not in a position to pay economic prices for water. The stage of a country's development is to be considered before adopting internationally accepted strategies.

### **Recommendations**

The adoption of participatory approaches that are more empowering are to be considered to improve participatory processes. Efforts are to be geared towards providing spaces for communities to take part in decision-making and not only for them to provide tangible inputs like labour. Also approaches for effective water management must take into consideration the available human and financial resources. Human capacity should be built in the area of planning and monitoring at the districts. The WRC, river basin boards and other practitioners should aim at limited participation, dealing on a project-by-project basis and representative participation. These will reduce the number of stakeholders; ensure inclusiveness; avoid under representation; limit the problem of loss of focus; and reduce time and cost required in organising and coordinating participatory activities.

Environmental CBOs that offer space for local participation are to be strengthened through training and skill development to create space for communities to channel their problems and needs, and assume their environmental responsibilities. The modern governance structures should accommodate the traditional governance structures to increase participation of locals in decision-making processes and improve good governance.

Participatory management efforts should be preceded by the identification of the collective needs of the people for them to participate actively. The river basin secretariats and NGOs should concentrate on linking management activities with livelihood activities to engender active involvement of various interest groups within the basin. This approach has the potential of empowering the people economically. It may also stimulate community interest, initiative and collective action in the management of the water resources. Ghana's experiences may serve as a lesson for developing countries with similar economic and technological contexts.

## **Samenvatting**

### **Stakeholder Participatie bij Waterbeheer: de case van het stroomgebied Densu in Ghana**

#### **Probleemstelling**

Veel wetenschappers en beleidsmakers betogen dat zgn. “*exclusive governance*” problematisch is. Dit komt omdat het niet voldoet aan de behoeften van mensen, het voorbijgaat aan de lokale realiteit en het mensen buiten spel zet. Het probleem van *exclusive governance* is ook zichtbaar in de watersector. De watercrisis die sommige regio's in de wereld treft wordt toegeschreven aan slecht water beheer. De internationale gemeenschap heeft Integraal Waterbeheer (IWRM) aangenomen als model om het probleem van slecht waterbeheer aan te pakken. Een van de belangrijkste principes van integraal waterbeheer is de participatieve benadering van waterbeheer.

Deelname van belanghebbenden, zo wordt gesteld, heeft in theorie veel voordelen binnen de watersector. Toch zijn de meeste IWRM interventies gericht op het functioneren van de wet- en regelgeving, en gaat men voorbij aan de mensen. Daarnaast is er relatief weinig onderzoek naar potentiële voordelen van *stakeholder* participatie binnen waterbeheer in ontwikkelingslanden, in vergelijking met andere landen. Vraag is of de verwachte voordelen, gezien de specifieke sociaal - economische en technologische context, kunnen worden gerealiseerd in een ontwikkelingsland als Ghana? Dit proefschrift onderzoekt de situatie van *stakeholder* participatie in Ghana, en heeft als doel bij te dragen tot een beter begrip van de uitdagingen waaraan participatieve processen bij waterbeheer binnen de Ghanese context, en Densu Basin in het bijzonder, blootgesteld zijn.

#### **Onderzoeksvragen**

Dit proefschrift richt zich op de volgende onderzoeksvragen:

- 1) Hoe beïnvloedt *stakeholder* participatie waterbeheer?
- 2) Hoe is *stakeholder* participatie vertaald in het beleid en de wetgeving, en hoe is het toegepast in Ghana?
- 3) Hoe intensief is *stakeholder* participatie binnen de besluitvorming en implementatie processen op het gebied van waterbeheer in Densu Basin - Ghana?
- 4) Hoe kunnen participatieve processen worden verbeterd bij het beheer van de watervoorraden?

#### **Methodologie**

Dit proefschrift combineert een uitgebreid literatuuronderzoek naar *stakeholder* participatie, met een inhoudsanalyse van officiële rapporten en documenten, en een gelaagde *case study* methodologie. Primaire gegevens zijn afkomstig uit interviews met relevante actoren op nationaal niveau, het niveau van stroomgebieden en op gemeenschapsniveau, van gouvernementele en niet - gouvernementele organisaties (NGO's). Er zijn focusgroeps gesprekken gevoerd met traditionele leiders en *Community Based Organisations* (CBO's). In totaal zijn er 123 individuele gesprekken en 26 groepsinterviews gehouden.

## **Literatuuronderzoek**

Uit het literatuuronderzoek naar *stakeholder* participatie (Hoofdstuk 2) blijkt dat dit een rol speelt in de ontwikkeling en uitvoering van het beleid. Participatie is aantrekkelijk voor beleidsmakers en wetenschappers, omdat het helpt de drie doelen van goed bestuur, democratie en duurzame ontwikkeling te verwezenlijken. Maar critici beweren dat er zwakke punten zijn in de toepassing ervan, zoals: a) oververtegenwoordiging van bepaalde groepen, b) uitsluiting van bepaalde groepen, c) risico op conflicten tussen deelnemers; d) het is tijdrovend en duur; e) gebrek aan procedures om diverse standpunten erbij te betrekken en f) verschillen in de mate waarin belanghebbenden betrokken worden bij besluitvormingsprocessen, die in de literatuur wordt aangeduid als de trap van *stakeholder* participatie.

De trap van *stakeholder* participatie geeft de gradatie van de intensiteit van *stakeholder* participatie aan. De hogere niveaus zijn gerelateerd aan intensieve *stakeholder* participatie, die wordt geassocieerd met effectieve deelname. Intensieve *stakeholder* participatie houdt in: (a) verantwoording; (b) transparantie; (c) inclusiviteit; (d) billijkheid (*equity*); (e) legitimiteit; en (f) een proces waarbij de posities van de belanghebbenden worden opgenomen in het besluitvormingsproces. Deze vorm van participatie resulteert in *empowerment*. Gemeenschappelijke actie vindt plaats bij een hoge mate van *stakeholder* participatie.

Er zijn twee belangrijke benaderingen van *stakeholder* participatie. De transformatieve benadering wordt geassocieerd met intensieve participatie. Deze aanpak verhoogt de sociaal- politieke en / of economische emancipatie van het individu of de gemeenschap. Er is sprake van een instrumentele benadering wanneer participatie wordt gebruikt als instrument voor het bereiken van vooraf bepaalde doelstellingen of betere beleidsresultaten; dit verhoogt meestal niet de emancipatie van het individu of de gemeenschap.

Onder intensieve participatie op de participatietrap volgt het 'minder intensieve participatie niveau' dat wordt geassocieerd met een gemengde transformerende - instrumentele benadering van *stakeholder* participatie. Verderop de trap is symboolpolitiek en vervolgens non-participatie. Instrumentele benaderingen zijn werkzaam op deze niveaus en deze dragen niet bij aan *empowerment* van belanghebbenden.

Na onderzoek van de theorie over participatie, gaat Hoofdstuk 3 in op de praktijk van participatie zoals beschreven in de literatuur, met name hoe *stakeholder* participatie wordt geïnterpreteerd en toegepast in ontwikkelingslanden. Uit de literatuur blijkt dat (i) interpretatie van *stakeholder* participatie afhangt van de doelstelling van het project of interventie. (ii) *stakeholder* participatie is toegepast in gebieden met gedecentraliseerde bestuurssystemen en via lokale water agentschappen in de watervoorziening. (iii) Sociaal-culturele, economische, en ontwikkelingsfactoren bepalen de mate waarin *stakeholder* participatie gunstig is voor de watersector.

Bewezen succesverhalen waren van gevallen waarin belanghebbenden werden geïnformeerd en geraadpleegd vanaf de vroege stadia van de projecten. Toepassingsmoeilijkheden werden geassocieerd met onvoldoende personele en financiële middelen en het niet meenemen van lokale kennis door de project partners.

## Ghana case studie

Hoofdstuk 4 evalueert *stakeholder* participatie en het decentralisatiebeleid in Ghana. Het laat zien dat er sinds 1988 sprake is van een decentralisatie trend. Het toepassen van het decentralisatiebeleid is beïnvloed door de ideeën over ontwikkeling van die periode; de politieke agenda van de zittende regering (tachtiger jaren) om de rurale gebieden te verstevigen, en het stabiliseren van het politieke systeem tijdens de crisis.

Het beleid van *stakeholder* participatie op lokaal niveau in Ghana is gekoppeld aan de wetten over decentrale planning van ontwikkeling en wetten met betrekking tot lokale overheden waar de *District Assembly's* (DAs) de belangrijkste eenheden zijn. *Stakeholder* participatie in de watersector is vastgelegd in het nationale waterbeleid en andere wetten in de watersector.

Het decentralisatiebeleid is er om mensen op lokaal niveau de kans te geven om intensief te participeren in hun eigen bestuur om zo verantwoording te garanderen. Er zijn echter de volgende uitdagingen: er is ten eerste gebrek aan democratie - de aanstelling van 30 % van de *District Assembly* -leden en de *District Chief Executive* door de centrale overheid stimuleert opwaartse verantwoording en ontmoedigt verantwoording richting lokale kiezers. Ten tweede is er onvolledige decentralisatie - (i) werving van personeel en de betaling van de salarissen aan de decentrale afdelingen worden centraal gedaan vanuit Accra (hoofdkantoor), dit veroorzaakt problemen op het gebied van loyaliteit van de afdelingen richting de DAs . (ii) Ontwikkelingsplannen en budgettaire beslissingen hangen af van goedkeuring door de overheid. (iii) De eisen die het Gemeenschappelijk Fonds van de DAs stelt belemmeren de DAs bij de beslissingen hoe de fondsen te investeren. (iv) Veel van de sub-structuren functioneren niet en *stakeholder* participatie op sub-district niveau wat betreft ontwikkelingsplanning komt neer symboolpolitiek, op de participatie-trap.

Hoofdstuk 5 evalueert *stakeholder* participatie binnen de waterwetgeving en -beleid in Ghana. De waterwetgeving en het nationale waterbeleid van Ghana bevorderen de gemeenschappen, de publieke en de particuliere sector binnen het waterbeheer, vooral in de sub-sector watervoorziening. *Stakeholder* participatie binnen waterbeheer op nationaal niveau gaat vooral om (a) het ontwikkelen van beleid en wetgeving, en het verstrekken van de nodige richtlijnen voor de verschillende vormen van watergebruik, (b) uitvoering en monitoring van beleid, en (c) de samenwerking tussen de overheidsinstanties bij het uitvoeren van hun functies.

De *Water Resources Commission* (WRC) Act 540 uit 1996 verbetert de participatie door het uitbreiden van het aantal belanghebbenden bij de besluitvorming en planning van WRC's activiteiten, alsmede bij de vervulling van haar taken. Echter, het aandeel van de overheids eenheden ten opzichte van de maatschappelijke en de particuliere organisaties, die het bestuur van WRC ondersteunen, is hoog, wat hoogstwaarschijnlijk gevolgen heeft op het besluitvormingsproces.

Hoofdstuk 6 onderzoekt *stakeholder* participatie op het gebied van de bescherming van water in de Densu Basin. Het laat vier verschillende manieren zien van het initiëren van *stakeholder* participatie: a) de belanghebbenden worden geïnduceerd om deel te nemen door middel van prikkels, zoals 'voedsel-voor-werk' of door betaling van arbeid. b) De belanghebbenden worden overgehaald om mee te doen aan participatieve processen door middel van bewustmaking. c) De belanghebbenden worden gemandateerd om deel te

nemen door de traditionele autoriteiten. d) De participatie van belanghebbenden is op eigen initiatief van *stakeholders* op basis van erkenning van de eigen behoeften. De eerste twee opties leiden niet tot een intensieve *stakeholder* participatie. De derde, de deelname van de traditionele autoriteiten is intensief. De vierde vereist intensieve *stakeholder* participatie aangezien de belanghebbenden zelf het initiatief nemen: zij nemen de beslissingen, en plannen en controleren de activiteiten zelf.

Op het stroomgebied niveau, lag de nadruk op de methoden die belanghebbenden in staat stellen actief deel te nemen aan het besluitvormingsproces met betrekking tot overheidsinstanties. Participatieve methoden die op gemeenschaps (*community*) niveau worden gebruikt zijn zodanig dat sommige de participanten machtigen, maar andere doen dat niet. NGOs en overheidsinstanties betrekken *Community-Based Organisations* (CBOs), leiders van de gemeenschap en individuen in participatieve processen met behulp van instrumentele benaderingen. Het niveau van deze participatie is symbolisch.

Hoofdstuk 7 onderzoekt de effectiviteit van *stakeholder* participatie in de watervoorzienings sub-sector in het Densu stroomgebied. Het toont aan dat Publiek-Private Samenwerking (PPS) in het stedelijk watervoorzieningssysteem werd ingevoerd om een effectieve en efficiënte dienstverlening te garanderen. Echter, de *stakeholder* participatie was beperkt tot de *Ghana Water Company Limited* en de particuliere exploitant, *Aqua Vitens Rand Limited*. Het publiek werd slechts geïnformeerd over de reeds genomen beslissingen.

Het rurale watervoorzieningsprogramma wordt uitgevoerd op het laagste niveau van de DAs door de *District Water and Sanitation Teams* (DWSTs) en de gemeenschaps wateragentschappen. De mate van deelname van deze organisaties is intensief vanwege hun actieve betrokkenheid bij de besluitvorming en implementatie processen van het water leveringssysteem. Er worden zowel transformatieve en instrumentele benaderingen gebruikt. Het is wel zo dat het programma zwaar leunt op externe donor fondsen. Deze donoren nemen deel aan de beleidsdialoog en dit kan het beleid en de projecten beïnvloeden.

De landelijke watervoorzienings sub-sector heeft de volgende resultaten geboekt: (a) Het heeft een uitgebreide aanpak van participatieve planning en participatie op gemeenschapsniveau, dat het volgende omvat: (i) een hoog niveau van publieke verantwoording en *empowerment*, (ii) betrokkenheid op lokaal niveau, en (iii) duurzaamheid van watervoorzieningen. (b) De democratische rechten van de gemeenschappen worden versterkt door het kunnen kiezen van (i) de leden van de watercommissies die hen vertegenwoordigen, en (ii) het meest geschikte type watervoorziening, rekening houdend met de kosten, en het type dat hen goede diensten kan leveren en gemakkelijk in onderhoud is. (c) Watervoorziening is verbeterd door middel van gemeenschapsparticipatie, eigendomsrechten, en training van de watercommissies. (d) De training heeft geresulteerd in de ontwikkeling van de menselijke capaciteit bij de besluitvorming op de laagste niveaus.

Echter, de landelijke watervoorzieningsprogramma's worden geconfronteerd met de volgende uitdagingen: (a) Er is een gebrek aan deskundigheid op lokaal niveau doordat de DWSTs niet over de nodige technologische kennis beschikken om particuliere aannemers te selecteren en te controleren, wat leidt tot afhankelijkheid van de regionale CWSA. (b)

Het motiveren van de vrijwillige leden van de commissie Water en Sanitatie (WATSAN) om hun taken met interesse uit te voeren. (c) Er is onvoldoende vermogen bij sommige WATSAN commissies om fondsen aan te leggen voor de uitvoering en onderhoud (U & O) van de watervoorzieningen. (d) De kleine en arme gemeenschappen zijn niet in staat om geld in te zamelen voor de vijf procent kapitaaldeckingskosten.

Hoofdstuk 8 beschrijft de invloed van traditionele governance-systemen en de economische context op participatie in de Densu Basin. Het laat zien dat de traditionele governance-systemen in de rurale gebieden worden bepaald door de traditionele normen en instellingen. Het systeem is gedecentraliseerd en de kantoren en bijbehorende verantwoordelijkheden hebben een hiërarchische structuur. De traditionele normen en waarden machtigen de traditionele autoriteiten om invloed uit te oefenen en zij hebben de grootste beslissingsbevoegdheid binnen de gemeenschappen.

De economische omstandigheden voor boeren en vissers is zodanig dat zij gemotiveerd worden door hun gemeenschappelijke belangen en zij ondernemen collectief activiteiten die belangrijk zijn voor hun levensonderhoud. Boeren werken in groepen samen via participatieve processen om toegang te krijgen tot irrigatie-water, wat hun gemeenschappelijk belang is. Vissers werken ook samen om de visserij in de *Weija* mogelijk te maken op een duurzame manier. De verschillende groepen nemen intensief deel aan de besluitvormingsprocessen voor het beheer van de watervoorraden die voorzien in hun levensonderhoud.

## Conclusies

Hoofdstuk 9 herinnert aan de belangrijkste doelstelling van het onderzoek en de belangrijkste bevindingen. De participatie literatuur laat verschillende aspecten van *stakeholder* participatie zien. Bij de discussies over ontwikkeling, is de nadruk bij participatie verschoven van verstrekking van materiaal bij implementatieprocessen richting de bijdrage van participatie aan de besluitvorming en beleidsvormingsprocessen en/of machtsverhoudingen. *Stakeholder* participatie is gerelateerd aan goed bestuur, democratie, duurzame ontwikkeling en decentralisatie. Kortom, *stakeholder* participatie heeft in theorie de mogelijkheid om de kwaliteit van de besluitvorming en beleidsvorming te verbeteren.

Op internationaal niveau, laten de ervaringen uit de ontwikkelingslanden zien dat de kennis en vaardigheden van belanghebbenden worden verhoogd wanneer zij actief deelnemen aan activiteiten waarbij mensen met uiteenlopende achtergronden betrokken worden. In het algemeen, wordt waterbeheer beïnvloed door de *stakeholder* participatie via het integreren van lokale kennis bij beslissingen die betrekking hebben op het beheer van natuurlijke hulpbronnen. Effectieve en aanvaardbare lokale strategieën voor waterbeheer zijn in ontwikkeling, er is sprake van verbeterde efficiëntie bij de uitvoering van projecten en verbeterde kwaliteit, toegankelijkheid en de betrouwbaarheid van water systemen. Toepassingsproblemen van *stakeholder* participatie in ontwikkelingslanden worden geassocieerd met menselijke en financiële aspecten, en het buiten beschouwing laten van lokale kennis. In Ghana zijn deze voordelen zichtbaar, alsmede de toepassingsproblemen op het gebied van de beperkte hulpbronnen.

Binnen de decentralisatie wetten van Ghana wordt *stakeholder* participatie uitgelegd als de incorporatie van de belangen van het publiek in de planning van ontwikkelingstrajecten, via hun vertegenwoordigers in de *District Assemblies*. Echter, de

toepassing van het decentralisatieproces in Ghana voldoet niet aan de theoretische verwachtingen van het bevorderen van participatie op lokaal niveau wat betreft de planning van ontwikkeling.

Het Nationale Waterbeleid en de waterwetten zorgen voor participatie van alle belanghebbenden binnen het waterbeheer. Op nationaal niveau wordt de samenstelling van de besluitvormingseenheid, de WRC, gedomineerd door overheidsinstellingen. Ghana is niet in staat om het aantal participanten te vergroten vanwege de kosten. Op het niveau van de stroomgebieden, controleert de stroomgebied-raad het waterbeheer, deze is voornamelijk samengesteld uit overheidsinstellingen binnen de watersector. De rol van de *stakeholders* in de besluitvorming en implementatie processen bepaalt de intensiteit van de participatie. Gouvernemente en non-gouvernemente organisaties initiëren activiteiten en stellen actieplannen op.

Het onderzoek toont aan dat de gemeenschappen intensief deelnemen aan activiteiten die zij zelf identificeren. Naast de landelijke water voorzienings sub-sector is er geen formeel platform voor de lokale bevolking om te participeren in het waterbeheer. Veeleer vormt de lokale bevolking *Community Based Organisations* die de mogelijkheid bieden deel te nemen aan activiteiten met betrekking tot waterbeheer.

De traditionele instanties zijn in staat om participatie van de mensen in de gemeenschappelijke activiteiten te vergemakkelijken doordat deze instanties legitimiteit genieten. De mensen voldoen aan de door stamhoofden ingestelde regels om de watervoorraden te beheren binnen de traditionele governance- systemen in de rurale gebieden.

Bij het beheer van de watervoorraden onderneemt de lokale bevolking collectieve acties wanneer het gaat om economische activiteiten, waarvan zij afhankelijk zijn voor hun levensonderhoud. Participatie wordt dus versterkt wanneer gemeenschappen actief deelnemen vanaf het begin van een project dat zich richt op kwesties die gevolgen kunnen hebben voor hun levensonderhoud.

Er zijn voordelen die voortvloeien uit de toepassing van *stakeholder* participatie in Ghana. (i) Waterbeleid en integrale waterbeheerplannen voor stroomgebieden profiteren van de input van actoren uit verschillende watergebruik sectoren. (ii) De vraagsturing in het watervoorzieningssysteem legt de verantwoordelijkheid op om te voorzien in de daadwerkelijke behoeften van de belanghebbenden en de verbetering van het herstel van de O&M kosten van de faciliteiten. Er zijn echter ook problemen bij participatie processen in Ghana. (i) De belangrijkste uitdaging schuilt in het feit dat professionals – NGOs en overheidsinstellingen - niet geneigd zijn de macht te delen met de *stakeholders*, wat resulteert in symbolische participatie door de gemeenschappen. (ii) Het is moeilijk om geschoold personeel te werven bij de lokale water agentschappen. (iii) Er zijn beperkingen wat betreft opleidingscapaciteit en capaciteit van gebouwen bij de *District Assemblies*, DWSTs, bestuur van het stroomgebied en lokale water agenten, en er zijn beperkingen bij het organiseren van participatieve activiteiten.

Deze studie voorziet in een complexe trap van participatie die de verschillende niveaus van *stakeholder* participatie integreert met de verschillende elementen van *stakeholder* participatie. Dit biedt een raamwerk, dat kan dienen als een nuttig instrument om

participatie te meten op basis van de elementen van de participatie. Ten tweede, hebben problemen rondom stakeholder participatie in een ontwikkelingsland als Ghana te maken met personele en financiële middelen. Ten derde, de manier waarop decentralisatie wordt geïnterpreteerd bepaalt de intensiteit van *stakeholder* participatie van de lokale bevolking bij het beheer van natuurlijke hulpbronnen. Deelname van belanghebbenden wordt vergemakkelijkt wanneer de gedecentraliseerde structuren functioneel zijn en voldoende ruimte bieden voor dialoog en voor de stem van de gemarginaliseerden om te worden gehoord. Ten vierde, niet alle internationale ideeën en beleid op het gebied van waterbeheer zijn geschikt voor ieder land. Mensen in ontwikkelingslanden zijn niet in de positie om economische prijzen te betalen voor water. Het stadium van ontwikkeling van een land moet worden beschouwd alvorens internationaal aanvaarde strategieën worden aangewend.

### Aanbevelingen

Het toepassen van een participatieve benadering die *empowerment* bevordert kan de participatieve processen verbeteren. De inspanningen moeten daarbij worden gericht op het verstrekken ruimte voor gemeenschappen om deel te nemen aan de besluitvorming en niet alleen aan het leveren van concrete zaken als arbeid. Daarnaast moet bij een participatieve benadering ten behoeve van effectief waterbeheer rekening worden gehouden met de beschikbare menskracht en de financiële middelen. Zgn. *human capacity* moet onderdeel zijn van de planning en de controle mechanismen bij de districten. De WRC, besturen van de stroomgebieden, en andere professionals moeten hun deelname beperken, het per project bezien en aansturen op representatieve participatie. Dit zal het aantal belanghebbenden reduceren; zorgen voor inclusiviteit; het voorkomen van ondervertegenwoordiging; het probleem van gebrek aan focus beperken; en het besparen van tijd en kosten die horen bij de organisatie en coördinatie van participatieve activiteiten.

Milieu *Community-Based Organisations* (CBOs) die ruimte bieden aan lokale participatie moeten worden versterkt door middel van training en ontwikkeling van vaardigheden, zodat zij gemeenschappen de ruimte kunnen geven om hun problemen en behoeften kenbaar te maken, en zij verantwoordelijkheid voor het milieu kunnen nemen. Binnen de officiële governance-structuren zou er plaats moeten zijn voor de traditionele governance-structuren om de participatie van de lokale bevolking te verhogen in de besluitvormingsprocessen en om goed bestuur te verbeteren.

Inspanningen op het gebied van participatief management moeten worden voorafgegaan door de identificatie van de collectieve behoeften van de mensen, zodat zij actief deel kunnen nemen. De secretariaten van de stroomgebieden en de NGOs moeten zich richten op het koppelen van management activiteiten aan activiteiten die betrekking hebben op het levensonderhoud, dit om actieve betrokkenheid van verschillende belangengroepen binnen het stroomgebied te stimuleren. Deze aanpak kan in potentie mensen economisch weerbaarder maken. Het kan ook het gemeenschapsbelang stimuleren, alsmede het initiatief en de collectieve actie in het beheer van de watervoorraden. Ghana's ervaringen kunnen een les zijn voor andere ontwikkelingslanden met vergelijkbare economische en technologische achtergrond.



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## Abbreviations

ADB	Asian Development Bank
ADRA	The Adventist Development and Relief Agency
AES	Acting Executive Secretary
AFD	Agence Francaise De Development
Agric.	Agriculture
AMA	Accra Metropolitan Assembly
AVRL	Aqua Vitens Rand Limited
CBAG	Community Biodiversity Advisory Group.
CBN	Christian Broadcasting Network
CBOs	Community-based organisations
CFA	Common Fund Administrator
CHA	Controlled Hunting Area
CIDA	Canadian International Development Agency
CNA	Comisión Nacional del Agua (National Water Commission)
CSPGS	Cross-Sectoral Planning Groups
CVC	Cauca Valley Corporation
CWSA	Community Water and Sanitation Agency
CWSD	Community Water and Sanitation Division
DA	District Assembly
DACF	District Assemblies Common Fund
DANIDA	Danish International Development Agency
DBB	Densu Basin Board
DCE	District Chief Executive
DFID	Department for International Development
DPCUs	District Planning Coordinating Units
DWNP	Department of Wildlife and National Parks
DWST	District Water and Sanitation Team
EHS	Environmental Health and Sanitation
EHSD, MoH	Environmental Health and Sanitation Department of the Ministry of Health
EPA	Environmental Protection Agency
ER	Eastern Region

EU	European Union
FC	Forestry Commission
FD	Fisheries Department
FGD	Focus Group Discussion
FRWB	Friends of Rivers and Water Bodies
FSD	Forestry Services Division
GAPVOD	Ghana Association of Private Voluntary Organisations in Development (NGOs that are related to water)
GDP	Gross domestic product
GIDA	Ghana Irrigation Development Authority
GLSS	Ghana Living Standards Survey
GOFA	Global Organization for Fundamental Aid
GoG	Government of Ghana
Gov't	Government
GPRS II	Growth and Poverty Reduction Strategy II
GSGDA	Ghana Shared Growth and Development Agenda
Gt. AR	Greater Accra Region
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation)
GWCL	Ghana Water Company Limited
GWP	Global Water Partnership
GWSC	Ghana Water and Sewerage Corporation
HESEWA	Health through Sanitation and Water
HSD	Hydrological Services Department
IAS	Institute of African Studies
IC	Irrigation Committee
ISSER	Institute of Statistical, Social and Economic Research
IWMI	International Water Management Institute
IWRM	Integrated water resources management
JICA	Japan International Cooperation Assistance
KfW	Kreditanstalt für Wiederaufbau (German Development Bank for Reconstruction)
KVIP	Kumasi ventilated improved pit (latrine)
LC	Lands Commission
LGS	Local Government Services

LI	Legislative Instrument
M/DWST	Municipal/District Water and Sanitation Team
MA	Municipal Assembly
MC	Minerals Commission
MDAs	Ministries, Departments and Agencies
MDGs	Millennium development goals
MEST	Ministry of Environment, Science and Technology
MFEP	Ministry of Finance and Economic Planning
MIS	Management Information Systems
MLF	Ministry of Lands and Forestry
MLGRD	Ministry of Local Government and Rural Development
MLNR	Ministry of Lands and Natural Resources
MMDAs	Metropolitan/Municipal/District Assemblies
MMDPCU	Metropolitan, Municipal, District Planning Coordinating Units
MMDPUC	Metropolitan/Municipal/District Planning Unit Committee
MOFA	Ministry of Food and Agriculture
MTDPs	Medium-Term Development Plans
MWH	Ministry of Works and Housing
MWRWH	Ministry of Water Resources, Works and Housing
NADMO	National Disaster Management Organisation
NCC	National Council on Culture
NCWSP	National Community Water and Sanitation Programme
NDPC	National Development Planning Commission
NEPAD	New Partnership for Africa's Development
NGOs	Non-governmental organisations
O&M	Operation and maintenance
OCEPB	Okyeman Community Environmental Protection Brigade
OECD	Overseas Economic Cooperation Fund
OEF	Okyehene Environmental Foundation
PAR	Participatory Action Research
PHED	Public Health Engineering Department
PNDC	Provisional National Defence Council
PPP	Public-private partnership
PRA	Participatory Rural Appraisal

PURC	Public Utilities Regulatory Commission
PWD	Public Works Department
RBC	River Basin Committee
RCC	Regional Coordinating Council
RPCUs	Regional Planning Coordinating Units
RWD	Rural Water Department
RWSTs	Regional Water and Sanitation Teams
SAP	Structural Adjustment Programme
SEA	Strategic Environmental Assessment
Sida	Swedish International Development Cooperation Agency
S-K-C	Suhum-Krabo-Coaltar
SP	Stakeholder participation
UNCHS	United Nations Centre for Human Settlement
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
URWSP	Upper Region Water Supply Project
VDA	Village Development Association
VHC	Village HESAWA Committee
VRA	Volta River Authority
VWSC	Village Water and Sanitation Committees
WAC	Water for African Cities
WARM	Water Resources Management
WATSAN	Water and Sanitation
WAWI	West Africa Water Initiative
WAWP	West Africa Water Partnership
WCED	World Commission on Environment and Development
WHI	Water Health International
WHO	World Health Organisation
WLPA	Weija Lake Protection Association
WMC	Water management committee
WQI	Water Quality Index
WRC	Water Resources Commission
WRI	Water Research Institute

WRIS	Water Research and Information Services
WSD	Water Supply Division
WSDB	Water and Sanitation Development Board
WTO	World Trade Organisation
WUA	Water user association
WUG	Water user group
WVI	World Vision International
WWF	World Water Forum
ZFU	Zimbabwe Farmers Union

# 1 Problem and Method of Investigation

## 1.1 Introduction

Development planning until the mid-1970s has generally been a hierarchical top-down process. This top-down approach or centralised development policymaking and planning has attracted several criticisms from neo-liberal institutionalists (Hadiz, 2004; Lammerink et al., 1999). Exclusive governance of social systems is argued to be ineffective relative to participatory governance (Fraser et al, 2006; Leach, 2004; Webler and Tuler, 2001). The neo-institutionalist literature suggests that a vibrant civil society contributes to good governance and democratisation by ensuring greater public participation in development policymaking and planning (Fraser et al., 2006; Pound et al., 2003; Chambers, 1997; Oakley, 1991).

Theoretically, the shift towards participatory governance has many advantages in the water sector. These include enhancing good governance, democracy, sustainable development and the empowerment of stakeholders. These advantages are manifested in the use of local knowledge to improve water resource management. Other benefits are the empowerment of marginalised groups ignored in water management decision-making, thereby raising the legitimacy of water policies and outcomes and enhancing institutional accountability in water governance. Can these theoretical benefits be realised by all countries? Can stakeholder participation be a panacea to policymaking and planning for water resource management in developing countries? This thesis examines the possible contributions of stakeholder participation to the development and management of water resources in Ghana generally and in the Densu Basin in particular.

The purpose of the thesis is to understand how stakeholder participation in water resources management is applied in the Densu Basin, assess whether the theoretical advantages of stakeholder participation are actually achieved in fact. Of importance to this study are the possible lessons that experiences in the Densu Basin might offer with regard to how stakeholder participation enhances good governance, democracy, sustainable development and stakeholder empowerment. The rest of this first chapter consists of four sections, which detail the problem statement of this study, which is lack of stakeholder participation or exclusive governance in water resources management; and the ensuing research questions guiding this study. The remaining sections cover the methodology of the study and the overall structure of the thesis.

## 1.2 Problem Definition

Poor water governance is believed to be the root cause of the water crisis confronting some regions in the world (Pahl-Wostl, 2007; Gupta, 2004; Keen, 2003; WWC, 2003). The water crisis is in the form of freshwater scarcity and its degraded quality or flooding when there is inability to control the abundance of water. Water scarcity is experienced as unequal access to water and conflicts between different uses and users (Wester et al., 2003). Globally, 1.1 billion people lack access to safe drinking water, that is, one-sixth of the world population live without safe drinking water (World Economic Forum Water Initiative, 2009; World Water Council, 2009).



Ghana, which is the country this research is focused on, is also faced with the water problem. Ghana appears to have abundant water resources, but the sustainability of this water endowment is threatened by natural phenomena such as extreme spatial and temporal variability of climate particularly rainfall. Human factors including excessive exposure of land surface and pollution contribute to the freshwater scarcity. These may result in conflict between different uses (Ghana Integrity Initiative, 2011; WRC, 2005). It has been estimated that Ghana will be a water stressed<sup>1</sup> country by 2025 unless these debilitating factors are well managed (WRI-CSIR, 2010; GWP/WAWP, 2002). The management process may call for a 'good governance' system.

The elements of good governance are reckoned to address the problem of the water crisis. These elements include accountability, transparency, inclusiveness, legitimacy, equity, efficiency and effectiveness in water resource use, service allocation and distribution; and in basin based water administration (UNDP, 2012; Solanes and Jouravlev, 2006; Barreira, 2006). Stakeholder participation which is one of the principles in good governance is believed to be a determining factor in addressing poor water governance (Reed, 2008; Allen, 2007; Harvey and Reed, 2006; Medema and Jeffrey, 2005).

Water management in the past has been dominated by the sectoral approaches (Butterworth et al., 2010). After three decades of debates at conferences, summits, forums and research a consensus on Integrated Water Resources Management (IWRM) as a model for water resources management was reached by the international community to address the water management crisis. The most instrumental conferences are the International Conference on Water and Environment held in Dublin in 1992; the United Nations Conference on Environment and Development at Rio de Janeiro in 1992; and the Second World Water Forum and Ministerial Conference held in The Hague in 2000. Others are the International Conference on Freshwater in Bonn in 2001; the World Summit on Sustainable Development in Johannesburg in 2002; as well as the Third, Fourth, Fifth and Sixth World Water Forums held in 2003, 2006, 2009 and 2012 respectively in Kyoto, Mexico, Istanbul and Marseille respectively.

IWRM has been defined variably (Cardwell et al., 2006; Jeffrey and Gearey, 2006; Thomas and Durham, 2003; Newson, 2000; Koudstaal et al., 1992; UNDP, 1990). Some scholars define IWRM as emphasising social interdependence for planning that balances all the relevant views of stakeholders<sup>2</sup> (Grigg, 1999). However, the most widely cited definition is that developed by the Global Water Partnership (GWP) (2000: 22) as "a process which promotes the coordinated development and management of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems". This definition points to the need to maximise economic and social welfare while ensuring equity and sustainability of vital ecosystems.

Several principles have been derived for sound water management but the Dublin principles reflect the key principles that are widely accepted. The four key IWRM principles adopted by the Dublin Conference on Water and Environment are:

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<sup>1</sup> Water stress is having per capita freshwater supply in the region of 1,000 to 1,600 cubic meters per year (Rijsberman, 2004; Falkenmark, 1994).

<sup>2</sup> It indicates the importance of stakeholder participation.

- “Water is finite, vulnerable and essential resource which should be managed in an integrated manner;
- Water development and management should be based on a participatory approach, involving users, planners and policymakers at all levels;
- Women play a central part in the provision, management and safeguarding of water; and
- Water has an economic value in all its competing uses and should be recognised as an economic good” (GWP, 2000: 13-14).

The first Dublin principle, described as holistic, demands that water resources are to be managed in an integrated manner. As opposed to the sectoral approach, this principle advocates for a comprehensive approach in managing water resources (Jeffrey and Gearey, 2006). It is an approach that aims at managing activities to meet both socio-economic and environmental objectives (Placht, 2007; Cardwell et al., 2006, Giupponi et al., 2006; Rahaman and Varis, 2005; David, 1986: 309). Integration, it is argued, is required of both natural and human systems within and between themselves (Funke et al., 2007; ESW, 2007; Bandaragoda, 2005; Jønch-Clausen, 2004). Within the natural system integration is required between land and water resources; freshwater and coastal zones; surface water and ground water, upstream and downstream; “green water” and “blue water”<sup>3</sup>; and water quantity and quality (ESW, 2007; Bandaragoda, 2005; Jønch-Clausen and Fugl, 2001; GWP, 2000). Within the human system integration is required between demand and supply, across various water use sectors and among stakeholders (Bandaragoda, 2005; Jønch-Clausen, 2004; Dungumaro and Madulu, 2003; Jaspers, 2003; GWP, 2000). The integration involves different sectors and multiple objectives as well, created by the many demands from diverse stakeholders. This approach therefore calls for public involvement or stakeholder participation.

The third Dublin principle is also associated with the participatory principle of involving all stakeholders but with a focus on women in decision-making process because of the central role played by women in water management (ESW, 2007; Funke et al., 2007; Savenije and van der Zaag, 2000; van Wijk-Sijbesma, 1998). The gender sensitive approach developed from this principle is based on the recognition that the creativity, energy and knowledge of both genders contribute to making different water schemes work better. The different roles and responsibilities of men and women can have competing claims which can be complementary in some instances and in other cases women can lose out. Therefore, they are required to be taken into account in decision-making processes (World Water Vision, 1999).

The fourth principle, recognising the economic value of water, requires the use of the market for rational allocation of water as a scarce resource among competing uses. The other interpretation of this principle is treating water as an economic good. This calls for the use of charges and prices to ensure sustainability and efficient usage of water resources and cost recovery (Funke et al., 2007; Lamoree and van Steenberg, 2006; CapNet, 2003; Grimble, 1999). However, there are arguments that water should be free

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<sup>3</sup> Green water refers to rainfall that infiltrates and remains in the soil and can be absorbed by plants. Blue water refers to all of the rainwater that does not stay in the soil as green water but enters rivers, lakes, and groundwater (Zaks and Monfreda, 2006).

for the people that cannot afford to pay (Rahaman and Varis, 2005; Schouten and Moriarty, 2003). These arguments are based on the basic right of all human beings to have access to affordable clean water and sanitation (Snellen and Schrevel, 2004; CapNet, 2003; Agenda 21 of the United Nations Conference on Environment and Development at Rio de Janeiro, 1992). In response to these concerns, in July 2010, the UN General Assembly adopted a declaration on the human right to water and sanitation (Gupta et al., 2010).

The second principle demands participatory approaches to water management. That is involving all stakeholders at various levels. It includes sectoral level involvement of organised entities, users and authorities usually at the national level; and involvement of local level organisations and community groups in decision-making at the local level usually within one hydrographic basin, sub-basin or community level (Funke et al., 2007; Brüscheiler, 2003). The subsidiarity principle, which requires that decision-making in water management is best done at the lowest appropriate level, is contained in this second Dublin principle of the participatory approach (Fatch et al., 2010; ICWE, 1992).

It is argued that participation is one of the key factors for sustainable water use and successful implementation of basin management plan and new policies (Mouratiadou and Moran, 2007; Pahl-Wostl, 2007; Healy, 2006; Creighton, 2005). Water resources management related policies require the knowledge, experience and opinions of local communities who are the 'key (primary) stakeholders' in resource conservation (Reed, 2008; Neef, 2008; Cronin and Ostergren, 2007; Abers, 2007; Koontz and Johnson, 2004; Biswas, 1990). Planning from bottom-up with the involvement of stakeholders and the people at the grassroots has been argued for (Fraser et al., 2006; Chambers, 1997; Oakley, 1991) and found to enhance water management (Neef, 2008; Hooper, 2003; Dungumaro and Madulu, 2003; Beierle and Cayford, 2002; Bryner, 2001; Beierle and Konisky, 2000).

Multi-stakeholder participation is expected to lead to a more holistic and integrated coordination of resource management (Antunes et al., 2009; Videira et al., 2006). Inferred from the GWP definition of IWRM, equity is one of the core precepts of IWRM. It "means all people must have access to water of adequate quantity and quality" (Placht, 2007: 2). Participation of stakeholders is believed to be one of the ways to ensure equity in water management (Placht, 2007; Giupponi et al., 2006; Jaspers, 2003). Public participation in decision-making and implementation is expected to promote efficient, effective, equitable and sustainable water projects (Araral, 2009; Allen, 2007; Harvey and Reed, 2006; Tandia, 2006; Kapoor, 2001; Kleemeier, 2000).

Neglect of participation of local individuals and organisations in formulation of integrated management plans has often been responsible for unsuccessful implementation of plans (Cain et al., 2000). Stakeholder involvement and community participation in setting water policies and regulating use is minimal, so projects often do not meet people's needs (Hinrichsen et al., 1998). Jaspers (2003) elaborates this position by arguing that

"It has become very clear that water resources planning without the participation of stakeholders in decision making is highly ineffective. Application of serious measures without the involvement of stakeholders nearly always seems to be lacking "fine tuning". Subsequently, an even bigger problem of enforcement arises. The issue of stakeholder participation is strongly related to the need for decentralisation or water management at the lowest appropriate level" (Jaspers, 2003: 80-81).

Jaspers's (2003) argument demonstrates that participation has a role in the decision-making machinery. This has led to a shift in attention to local approaches to development and especially the concept of 'popular participation'.

The above discussion shows that water resource management has gone through paradigm shifts moving away from sectoral to integrated management approaches. The integrated approaches have stakeholder participation as a key element (Lamers et al., 2010; Huitema et al., 2009; Pahl-Wostl et al., 2007b; Watson, 2007; Pahl-Wostl, 2007). Therefore, the adoption of IWRM invariably results in the application of participatory approaches. Public or stakeholder participation is seen to be important in the management of water resources in both the scientific and policy world. Current literature favours participatory approach (Özerol and Newig, 2008; Reed, 2008; Neef, 2008; Blackstock and Richards, 2007; Stringer et al., 2007; Fraser et al., 2006; Delli Priscoli, 2004; Jaspers, 2003; Chess et al., 2000) and the policy world also advocates for a participatory approach to the management of natural resources (see Carmona et al., 2011; Von Korff et al., 2010; European Commission, 2009; WSSD, 2002; GWP, 2000; Aarhus Convention of 1998; UN, 1992). Consequently, nations have come under increasing pressure to manage their water resources in a participatory manner: actively involving those that live with and directly depend on water resources such as local and non-local water users and other stakeholders. As a result, most governments of developing countries including Ghana have adopted participation in every sphere of their developmental efforts including the water sector.

A lot is therefore expected from stakeholder participation in the water arena and in development policymaking and implementation in general because of its potential benefits (Moellenkamp et al., 2010; Reed, 2008; Webler and Tuler, 2001; Webler, 1999). Stakeholder participation is fundamental to the principles of the IWRM. However, most interventions to apply IWRM have concentrated on the functioning of the legal and regulatory systems and ignored the people (Agyenim, 2011). There has been considerable research on the issue of the potential benefit of stakeholder participation in the developed world (De Stefano, 2010; Antunes et al., 2009; Rault and Jeffrey, 2008; Mouratiadou and Moran, 2007; Blackstock and Richards, 2007; Videira et al., 2006; Kallis et al., 2006; Jonsson, 2005) but the research in the developing world has been relatively limited. Work done on the specific nature of benefits accruing in the developing countries has been sparse (see Agyenim, 2011). It is therefore not clear if the anticipated benefits exist in developing countries considering their different socio-economic and technological contexts. The critical question is whether the theoretical advantages associated with stakeholder participation actually exist in countries such as Ghana.

The literature and research on participation (Moellenkamp et al., 2010; Reed, 2008; ESW, 2007; Videira et al., 2006) and especially the empowerment literature (Desai, 2008; Tippet et al., 2007; Chambers, 1997) are skewed towards participation in decision-making processes with less attention on implementation processes (Prokopy, 2005; Resurreccion et al., 2004). The concern is more on participation in decision-making processes because of the supposed empowering impact of participation in decision-making processes for people and communities. It is perceived that participation at the decision-making level is theoretically effective and politically right (Selman et al., 2010; Pahl-Wostl et al., 2007a; Placht, 2007; Mostert, 2006; Arnstein, 1969). However, there are additional questions, like after planning with people, what next? What happens to the implementation of plans

and policies? If people are not mobilised to participate in the implementation processes or if participation in implementation is neglected projects fail. These concerns emphasise the importance of participation in implementation or action processes.

Different proponents look at stakeholder participation with different spectacles. The literature also shows several concepts and elements associated with stakeholder participation. All these make stakeholder participation complex, however, these have not been put together for easy conceptualisation. In addition, there have been works on combining participatory processes involving formal agencies and local traditional groupings but the coordination between the two is not well defined and the interplay between the formal agencies and the informal/traditional groups at the local level along the lines of the associated concepts are not clear.

This thesis examines the context specific factors that affect stakeholder participation in a developing country such as Ghana. It focuses on how to integrate the numerous and related concepts and elements of stakeholder participation in order to allow for easy conceptualisation of the key issues underlying stakeholder participation. In interrogating the situation of stakeholder participation in Ghana, the thesis examines both the decision-making and implementation processes calling for deeper insights into the relationship between the formal and the informal agencies particularly traditional groups. It is envisaged that the resulting conclusions will allow an enhanced overview of the challenges that confront the participatory processes in water resources management in the Ghanaian context in general and the Densu Basin in particular. In addition, it offers suggestions on how to improve the participatory processes in water resources management in developing countries like Ghana.

### **1.3 Research Questions**

There are four main research questions guiding this study and they are:

- 1) How does stakeholder participation influence water resources management? What does the literature say about the potential benefits of stakeholder participation in general, and in the water sector in developing countries in particular?
- 2) How has stakeholder participation been interpreted in the policies and laws and applied in Ghana? How does the policy on stakeholder participation link with the water policy?
- 3) How intensive is stakeholder participation in the decision-making and implementation processes of water resources management activities in the Densu Basin in Ghana?
- 4) How can participatory processes be improved in the management of water resources? What are the implications of the empirical evidence for the theory of stakeholder participation?
  - i. What factors affect stakeholder participation in water resources management activities in the Densu Basin?
  - ii. How can the participatory processes be improved in the Densu Basin in Ghana?

- iii. What are the implications for theory? To what extent can experiences in the Densu Basin be generalised to other river basins?

## **1.4 Methodology**

The methodology consists of five key steps: a theoretical framework; a literature survey; content analysis of national policies and laws; stakeholder participation from a single layered case study; and extrapolation to developing countries where possible.

### **1.4.1 Theoretical Framework**

The theoretical framework focuses on assessing and building upon stakeholder participation, decentralisation theory, and the theories of good governance, democracy and development. The emphasis however, is on stakeholder participation. Stakeholder participation connotes the involvement of stakeholders in the decision-making and policymaking processes. The general argument is that stakeholder participation may contribute inputs into the decision-making or implementation process (Reed, 2008; Rowe and Frewer, 2004; 2005; Soneryd, 2004; Arnstein, 1969) and; sharing in the cost/benefit outcomes (Blackburn et al., 2002).

However, the decentralisation process demands that decision-making is devolved to the citizenry at the grassroots. Hence, decentralisation is of relevance to the operation of stakeholder participation (see 2.4.3). Stakeholder participation is anticipated to bring about democracy and good governance. Effective participation in development processes increases the likelihood of having democratic outcomes and ensuring equity (Reed, 2008); empowering marginalised groups and raising the legitimacy of policies and outcomes (Neef, 2008; Dougill et al., 2006) (see 2.5.). Thus stakeholder participation, decentralisation, democracy and good governance are interrelated and their potential outputs affect the success or otherwise of stakeholder participation.

Stakeholder participation is influenced by theories underpinning collective action such as the rational choice theory, which accepts that people will calculate the likely costs and benefits of any action before deciding on what to do. The anticipated outcome will influence the decision to participate or not. There are different outcomes that are expected from alternative courses of action and people will evaluate and choose that which is best for them (Heikkila and Gerlak, 2005; Rowley & Moldoveanu, 2003; Scott, 2000). Yet the mutual incentive theory developed by Simmons and Birchall (2005) suggests that incentive structures in the form of socio-psychological and economic rewards as well as losses are necessary for participants to choose rationally.

Participation can also be informed by the theory of group action. This is said to be inspired by common interest (Olson, 1971) and social identity theory (Rowley and Moldoveanu, 2003). Water is traditionally taken as a common good and of common interest. This is driven by the notion that stakeholders have interests, and they are likely to mobilise to protect or enhance those interests if there is a sense of urgency attached to their interests (Rowley and Moldoveanu, 2003). Participation demonstrates the positive recognition of a common good by the people whose achievement is found to be impossible with individual efforts but with the collective efforts of all (Mejos, 2007).

#### 1.4.2 Literature Survey

In order to address the research question an extensive literature review was carried out. Literature was reviewed from journals covering stakeholder participation, development, water and environmental related issues and Africa. These journals include Community Development Journal; Development and Change; Ecological Economics; Ecology and Society; Environment, Development and Sustainability; Environmental Science & Policy; Global Environmental Change; Journal of Contemporary Water Research & Education; and Journal of Environmental Management. Others are Natural Resources Forum; Physics and Chemistry of the Earth; Policy Sciences; Public Administration and Development; Science, Technology & Human Values; Society and Natural Resources; Third World Quarterly; Water Alternatives; Water Policy; West African Journal of Applied Ecology; and World Development. This research has also drawn extensively on available books in the field of study as well as newsletters related to participation, water and other related areas. The outcome of the literature survey is presented in Chapters 2 and 3.

#### 1.4.3 Content Analysis

The case study research examined the policy and legal documents on water management, decentralisation policy and stakeholder participation in Ghana. The purpose of the content analysis was to examine the extent to which stakeholder participation has penetrated the policy processes in Ghana. The content analysis was also done to describe and make inferences about the characteristics of the policies and the consequences. They were examined to find out whether they were comprehensive and what their limits were focusing on stakeholder participation, decentralisation and democracy. The intentions and focus of the policy and legal documents were also identified. Documents examined included the National Water Policy, the Local Government Act 462 (1993) and the National Development Planning (system) Act 480 (1994).

#### 1.4.4 Case Study Methodology

This subsection is devoted to the case study; it begins with the choice of the case study method, choice of the study area and background information on the study area. It follows with a selection of study communities and agencies. It presents the sources of data used and then the methods used to collect the data.

##### *Choice of case study method*

The nature of the research questions necessitates a case study approach to provide the needed answers. This approach leads to having one in-depth case study using the Densu Basin. The case study method is used because it gives the opportunity of using direct observation and systematic interviewing as evidence in collecting data, which are not found in other approaches (Yin, 2002). In addition, this study method is applicable when dealing with contemporary issues where the researcher has no control over behavioural events (Yin, 2008; George and Bennett, 2005).

The single layered case study methodology was employed. This is preferred to the other strategies because stakeholder participation in water resources management is a

contemporary phenomenon within a real-life context of a river basin. This method is used to explore situations like the participatory activities, which have no clear single set of outcomes.

There are criticisms of the case study approach, which can also be defended. Criticisms raised against the use of case studies include: (i) the likelihood of allowing biased views to influence the direction of the findings and conclusions (Yin, 2008) but such bias is not unique to case studies. What is important is that evidence must be reported fairly and that information for analysis must be as complete as possible (Patton, 1990). The case data consist of all the available information about each case including interview, observational and documentary data, and impressions and statements of others about the case. Since a case study includes multiple sources of evidence, it allows for triangulation, which helps to reduce the problem of bias. (ii) Case studies offer little basis for statistical generalisation. However, case studies offer analytic generalisations to theoretical propositions and not to populations (Yin, 2008). Case studies primarily seek to expand and make analytical generalisation of theory and not statistical generalisations. (iii) Case studies take a long time. To this, Yin (2008) explains that it may be due to improper equation of case studies to ethnographic studies.

#### *Choice of study area*

The case study country is Ghana with specific attention to the Densu River Basin (see Figure 1.1 for map). The Densu Basin was selected for this study because of five main reasons: a) The Densu Basin was selected as a pilot project on stakeholder participation in decentralised water resources management by the Water Resources Commission in Ghana to be replicated in other basins in the country (WRC, 2007a). Hence, more in-depth knowledge about participation in water resources management in the Densu Basin will affect water management in other river basins in Ghana in the future. b) It is the second biggest source of water supply for the largest city and the capital of Ghana, Accra. c) The Densu River is one of the most exploited rivers in Ghana (Hagan et al., 2011; WRC, 2008a; Mantey, 2007). d) It is a source of livelihood for the 1,736,403 (2010 estimate) people living in the basin (ISSER and IAS, 2003). e) There is a lack of information on water management and stakeholder participation in this basin; research on this basin can be integrated into policy efforts to replicate this decentralised policy elsewhere in the country.

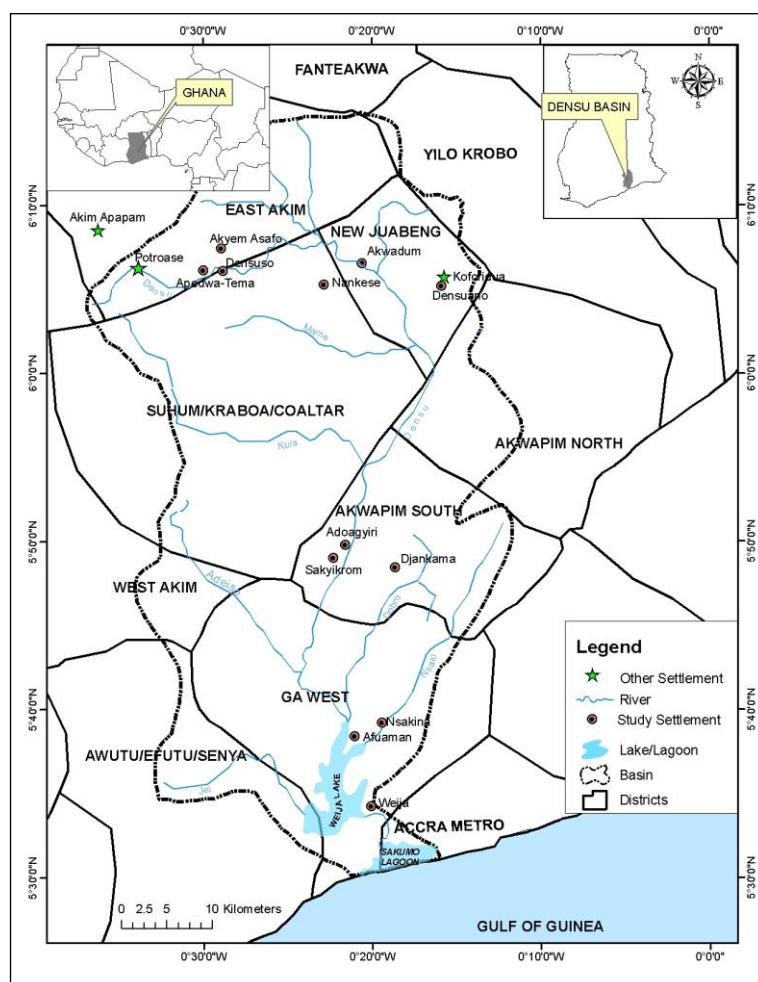
The river basin approach is used because all those living in a basin (the communities) have some interests in the common resource and they are likely to interact with each other. The concept of the river basin as a unit is supported in the literature; it has been argued that what happens in any part of the river will be felt elsewhere in the basin (Jewitt, 2002; Biswas, 1990). The river basin has also been identified as a closed region where there are incentives for people to come to an agreement on governance systems with water as the focus and often provides opportunities for modern governance networks (Cohen and Davidson, 2011; Koehler and Koontz, 2008; Baril et al., 2006; Rogers and Hall, 2003). Furthermore, this is where the traditional systems of water resources management are located. Though the basins may cut across sub-national administrative areas, which do not necessarily work together, the basin society usually referred to as a river basin agency or commission could require them to do so. The basin society may have certain governing capacities such as local knowledge, and needs such as technical



expertise. The government on the other hand cannot act alone and easily allocate and regulate water in the basin; as it is not close to the basin, it is unlikely to appreciate and be able to regulate water in a basin.

### *Background information on Densu Basin*

The Densu Basin is located between longitude 0° 10' and 0° 35' West and between latitude 5° 30' and 6° 20' North (see Figure 1.1, Densu River Basin). The Densu River is part of the Coastal River System in Ghana and it covers an area of about 2600km<sup>2</sup> (Abrahams and Ampomah, 2011; Hagan et al., 2011). The basin is bounded to the east and north by the Odaw and Volta Basins, respectively. It shares its northwest boundary with the Birim Basin and the west boundary with the Ayensu and Okrudu Basins. The Densu takes its source from the Atewa ranges near Kibi in the East Akim district and flows in an eastward direction towards Akwadum-Koforidua in the New Juaben Municipal area. In the southward direction, it flows through Nsawam in the Akwapim South Municipality into the Weija Lake before entering the Atlantic Ocean in the Gulf of Guinea through Sakumo Lagoon.



**Figure 1.1 Densu River Basin – Map of Study Area**

Source: Anokye and Gupta (2012).

The administrative structure of the Densu River Basin can be described as rather complex. The Basin spans over three administrative regions and thirteen districts, including part of the Accra metropolis (see Figure 1.1 for map). Table 1.1 shows a detailed description of various sections of the basin and the corresponding areas covered by the various districts. Nine of the thirteen districts covering approximately 72 percent of the basin are in the Eastern Region. Three of the remaining districts, which constitute 23 percent of the basin, are in the Greater Accra Region with the last district in the Central Region. This has implications for participatory processes because the number of regions and districts that are involved may give rise to complex coordinating and management activities with respect to resource management and utilisation in the basin.

**Table 1.1 Areas of Regions and Districts in the Densu Basin**

Region	Section of Basin	District	Area in Basin (Km <sup>2</sup> )                      (%)	
Eastern	Upper Basin	East Akim	334	12.8
		New Juaben	209	8.0
		Akwapim North	146	5.6
		Yilo Krobo	18	0.7
		Fanteakwa	10	0.4
		Kwaebibirem	2	0.1
		Suhum-Kraboaa-Coaltar	763	29.3
	Middle Basin	Suhum-Kraboaa-Coaltar		
		Akwapim South	322	12.4
	West Akim	88	3.4	
Greater Accra	Lower Basin	Ga West & South	546	21.0
		Accra Metro	30	1.2
		Ga East	10	0.4
Central Region		Awutu-Efutu-Senya	122	4.7
Densu Basin Total			2,600	100.0

Source: Extracted from WRC (2005) and ISSER and IAS (2003).

The Densu Basin provides water for domestic, agricultural and industrial purposes for communities living in the basin. The water resources of the basin also contribute substantially to the economic livelihood of the people living in the basin. The employment situation in the Densu Basin is such that 25 percent are unemployed, 60 percent are self-employed and 15 percent are in full-time formal employment (WRC, 2007a). This also shows that the majority of the economically active population is in the informal sector.

Table 1.2 gives the main occupation of the economically active population in the basin. Agriculture provides employment for the majority of the people in the basin. It is practised as both commercial and subsistence farming and as such provides income as well as food for the people. However, the farming practices have negative externalities on the natural resources (land, forests and water) (see 6.3.1 and 6.3.2).

Small-scale gold mining activities are common in the East Akim District and stone quarrying and sand winning activities are carried out around Koforidua in the New

Juaben Municipality, Nsawam in the Akwapim South Municipality and many localities in the Ga West and South Districts (Amoako et al., 2011).

In the urban areas, the economic activities are diversified and the prominent occupations include wholesale and retail trading, manufacturing and other commercial activities. The major manufacturing industries in the basin are mainly fruit processing and bottled water production, which rely on water resources in the Basin. The small-scale industries include auto-servicing; saw milling, carpentry, concrete block-making, local soap manufacturing, black-smithing and metal work. In addition, there are large commercial shops where manufactured goods are sold, and large open markets that form points of contact between rural and urban residents.

**Table 1.2 Occupation (in %) of Economically Active Population in the Densu Basin**

Economic activity or industry	District								
	East Akim	New Juaben	Suhum-Krabo-Coaltar	Akwapim North	Akwapim South	West Akim	Awutu-Efutu-Senya	Ga East, West & South	Accra Metro
Agric. & Forestry	57.7	15.9	59.9	50.1	46.9	59.8	36.8	13.9	3.7
Fishing	0.9	1.4	0.8	0.3	2.1	1.2	10.5	1.9	2.5
Mining & quarrying	1.1	0.7	0.4	0.5	1.4	1.2	0.9	1.9	1.4
Manufacturing	8.8	15.2	10.6	9.3	10.5	8.8	13.6	14.9	17.4
Wholesale & retail trading	11.5	28.6	13.4	16.7	17.1	13.6	16.0	27.2	33.9
Construction	2.6	6.0	1.7	3.0	2.7	1.4	4.4	10.1	5.5
Hotels & Restaurants	2.8	4.0	2.8	2.9	3.5	2.7	2.4	3.5	4.6
Transport & communication	2.2	5.3	2.6	3.6	3.7	2.5	3.8	6.8	6.6
Education	4.3	6.8	3.1	4.9	4.2	3.0	3.7	8.0	8.0
Other unspecified activities	8.1	16.1	4.7	8.7	7.0	5.8	7.9	11.8	16.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: WRC (2007a).

Other economic activities, which have some impact on the basin, are; fishing, logging, fuel wood harvesting, and small and medium scale manufacturing enterprises. Those people who engage in these economic activities including those who depend on the water and its resources for their livelihood and domestic purposes in the basin are primary stakeholders with regard to water resources management in the Densu Basin.

#### *Selection of communities*

Many communities are involved in the water resource management activities organised by the Water Resources Commission (WRC), non-governmental organisations (NGOs), District Assemblies (DAs) and Community Water and Sanitation Agency (CWSA). Of these eighteen communities were selected from the basin. The selection took into consideration the types of activities that have been organised by these communities, agencies and organisations in order to have a fair representation of the types of activities. Other variables that influenced the selection were the geographical location (thus upper basin, middle basin and lower basin) and the administrative districts.

The fieldwork covered two of the three regions in which the basin falls. These are the Eastern and Greater Accra Regions. Four districts were selected from the Eastern Region namely: East Akim District; New Juaben Municipal; Suhum-Kraboia-Coaltar District (upper basin); and Akwapim South Municipal (middle basin). From the Greater Accra Region Ga West Municipal and Ga South District from the lower basin were selected.

The key informants from the selected communities that the study focused on were traditional authorities and assembly members. Community-based organisations (CBOs) such as youth groups, Water and Sanitation (WATSAN) committees, small-scale users - farmers and fishermen; and household heads in the communities (see Table 1.4) were interviewed to find out their perceptions about engaging in participatory activities of water resources management. They are the beneficiary communities by place (see Table 1.3). Other primary stakeholders from whom data was collected included large-scale industrial and commercial users from the private sector within the Densu Basin; they are the beneficiaries by use. The beneficiaries are those affected by decisions or policies regarding water resources management.

**Table 1.3 Primary Stakeholders**

Types of beneficiary communities	Description	Examples
By place	They live in the basin near the water resource (locals), have direct influence on the resources, and are influenced directly by the decisions taken about the water resources.	Traditional rulers, assembly members, farmers, fishermen, household heads. WATSAN committees.
By use	They live in and outside the basin (locals and non-locals). They use the water resource, have direct influence on the resources, and are influenced directly by the decisions taken about the water resources.	Industrial and commercial users: small-scale and large-scale farmers, fishermen, mineral water producers, fruit processors.

*Selection of governmental and non-governmental agencies*

Secondary stakeholders (governmental and non-governmental organisations/agencies) who were selected for data gathering include the WRC, the Densu Basin Board, the CWSA and NGOs that organised participatory activities in water resources management in the basin. The reason for the selection is that the WRC, the Densu Basin Board, CWSA and the NGOs are the main agencies involved in participatory water resources management in the Densu Basin (see Table 1.4 for categories of agencies interviewed).

Other agencies selected include the Ghana Irrigation Development Authority (GIDA), the Ghana Water Company Limited (GWCL), the National Development Planning Commission (NDPC), the Forestry Commission (FC), the Environmental Protection Agency (EPA) and the Agricultural Extension Services. These are government organisations whose activities have some bearing on water and its resources but are not necessarily represented on the Densu Basin Board. All these categories of actors have

been presented in Table 1.4 at the various levels (national, regional/basin, district and community).

**Table 1.4 Categories of Agencies Interviewed**

Categories	Levels				
	National	Regional/Basin	District	Community	Total no. of interviews
Basin Board	WRC, GWCL, MOFA (3)	Densu Basin secretariat, EPA, FSD, NCC, ERCC, EHSD of MoH (6)	New Juaben, East Akim & Ga West Municipal/District Assemblies (3)	Represented on the board by the District Assemblies	<b>12</b>
Government organisations	EPA, FC, WRI, GWCL, women's representatives on WRC board; GIDA, PURC, WRC, CWSA, 2 NDPC officers (11)	3 CWSA, EPA, 2 GWCL/AVRL, GIDA officers (7)	1 Coordinating, 2 Budget & 2 Planning Officers; 4 DWSTs; Agricultural Extension Services (10)	Do not exist	<b>28</b>
NGOs	Friends of Rivers and Water Bodies (1)	GOFA, 2 ADRA officers, Earth Service. (4)	NGOs are based at the community, regional and national levels.	CBOs – 6 WSDBs/ WATSAN committees, 4 youth groups. (10)	<b>15</b>
Key informants	Have been catered for by interviewing respondents from the government agencies.	Have been catered for by interviewing respondents from the government agencies.	Have been catered for by interviewing respondents from the government agencies.	10 groups of traditional authorities, 2 assembly members, president of WLPA. (13)	<b>13</b>
Small-scale user groups	Not applicable	Not applicable	Not applicable	4 Farmer groups, 2 fishermen groups (6)	<b>6</b>
Large-scale users	Industrial and commercial users operate in the basin but some sell their products nationwide, 3 export their products.	Identified large-scale industrial and commercial users. (8)	Not applicable	Not applicable	<b>8</b>
Households	Not applicable	Not applicable	Not applicable	67 from 18 communities. (67)	<b>67</b>
Total no. of interviews	<b>15</b> individual interviews	<b>25</b> individual interviews	<b>13</b> individual interviews	<b>96</b> (70 individual interviews and 26 FGDs)	<b>149</b>

Source: Fieldwork (2009/2010)

### *Sources of data*

The study relied on multiple sources of information to maximise the access needed to collect the case evidence. Primary data was collected from community members, CBOs, traditional authorities, and small-scale user groups (primary stakeholders); District Assemblies within the Densu Basin and actors from governmental and non-governmental organisations at the basin/regional and national levels (secondary stakeholders). Secondary data was acquired from written reports including annual reports, studies and brochures from organisations, policy documents and newspapers. The multiple sources of evidence enhanced the validity and completeness of the data (Yin, 2008; Frankfort-Nachmias and Nachmias, 1996; Patton, 1990).

*Data collection methods*

The study is mainly qualitative in terms of data collection and analysis. The main methods for acquiring the necessary data were semi-structured and open-ended individual interviews. In addition were key informant interviews, focus group discussions, observation and document review. The multiple methods that were used gave room for triangulation where information obtained from one source was cross checked for confirmation. Interview schedules and guides were developed to keep the interviews on focus (see Appendix I). They comprised questions that solicited information on participatory processes in water resources management including decision-making processes such as the design and approval of water policies and programmes; strategic planning; and planning of specific projects as well as implementation processes.

The interview questions for the communities were tested to see if they were clear and gave information that helped to answer the research questions. The testing was done at Ashalaga a community in the lower basin in 2009. Each interview session yielded fresh insights that were fed into subsequent interviews. An observational guide/check list was also developed (see Appendix I).

The reason for using semi-structured and open-ended interviews was that they allowed the respondents room to express themselves and they were not restricted so much in the amount of information that they gave. Focus group discussions (FGDs) were held for the chiefs and their elders, CBOs and small-scale user groups. The FGDs allowed the seeking of both clarification and elaboration on the answers given. This ensured in-depth discussions and accurate information as members in the groups corrected themselves. The FGDs also allowed observation of how local stakeholders interact within the groups. Most of the interviews and discussions were recorded on tape with the permission of the interviewees. The recorded interviews helped to fill in missed out statements. Interviews have the strength of yielding rich insights into people's experiences, opinions and attitudes (May, 1997).

The interviews were carried out more informally. The questions were not followed strictly in the order in which they had been prepared. Most respondents wanted to talk so they were allowed to talk at the beginning and later asked the unanswered questions to fill in the gaps. The discomfort shown by respondents at the beginning of some of the sessions was dispelled through careful explanation of the research focus. A patient interaction with respondents answering their questions helped to relax and gain their confidence before the interview session.

Some difficulties were encountered in certain situations where the interviewees were so busy that they kept on re-scheduling the interviews. In certain cases, the interview session had to be delayed for several hours though appointments had been made earlier.

At the community level, permission was sought and appointment made through the traditional ruler or a representative to interview the chief and elders, community members and relevant CBOs. A bottle of schnapps was presented to the chief in each community in seeking permission, as it is the custom of most communities within the basin though some waived it off. It was found important to make contacts prior to the interview day because of the likelihood of not meeting the respondents. Also giving them long notices was found not to work, as they tend to forget about appointments.

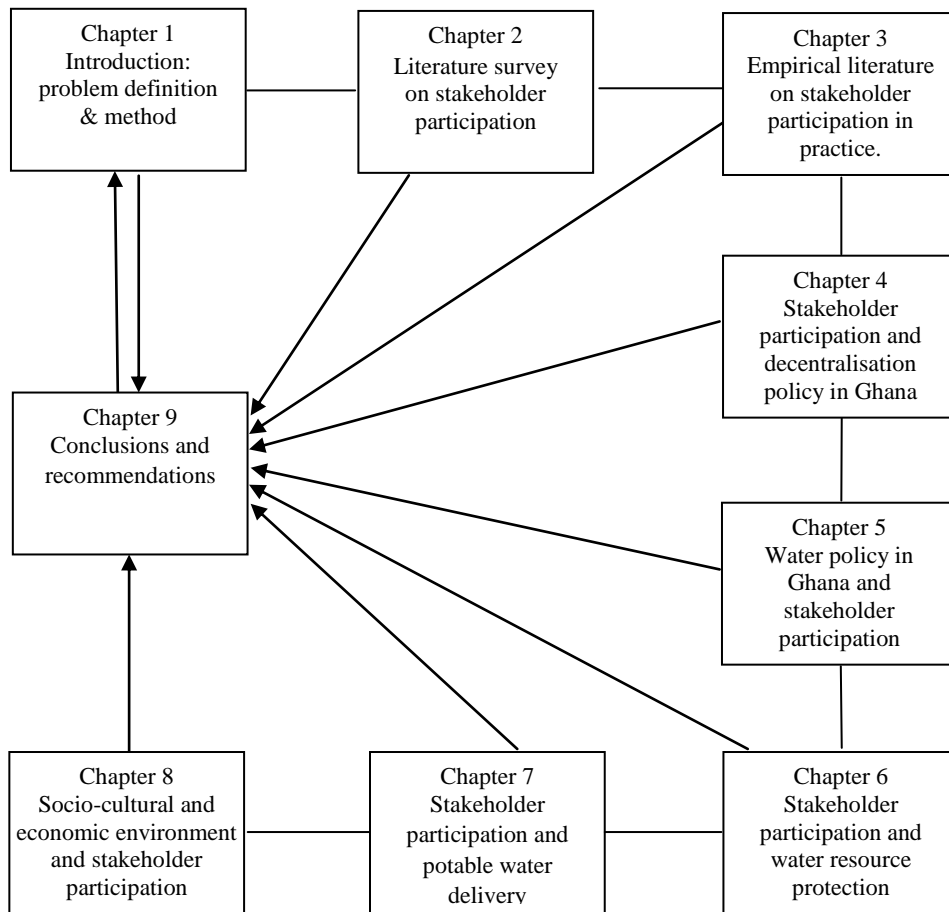
Another method that was employed was observation, which provided the opportunity for obtaining data directly from the field thereby preventing contamination (Yin, 2008; Frankfort-Nachmias and Nachmias, 1996). I attended some of the basin board and sub-committee meetings and workshops in 2009. I took part in some of the activities organised by the WRC/Densu Basin Board and the NGOs. These include an ecological monitoring tour of the upper basin; an open forum at Weija; and a school quiz at Weija where I had the honour to present prizes. I have also observed community members engaged in a communal work (construction of a foundation of a clinic). Photographs of relevant scenes were taken to augment evidence from other sources.

#### **1.4.5 Limitations of the Study**

The study focus on one river basin in one country presents difficulties in extrapolating to other country contexts. Despite numerous goals of stakeholder participation, the study focused on a limited selection. To ensure that these issues do not compromise the result of the study, the study examined a layered case at different levels of governance. This allowed some levels of extrapolation along the lines of contextual similarities, that is, developing countries with a similar economic and technological context like Ghana. In focusing on the three main goals of stakeholder participation, that is good governance, democracy and sustainable development the study captured a wider range of conceptual issues underpinning stakeholder participation. Further, these concepts formed the building blocks of the complex ladder of participation as a framework, which can serve as a useful measure for the various levels of the intensity with which various stakeholders are allowed to participate in different context of the development processes.

### **1.5 Structure of the Thesis**

The present chapter introduced the thesis. The second chapter presents the literature survey on the key concepts of stakeholder participation including related concepts and theories, weaknesses, approaches, methods, and intensities of stakeholder participation. The third chapter deals with the literature review on experiences of stakeholder participation from case studies undertaken in the developing countries. Chapters 4 to 8 discuss findings from the Ghana case study (refer to Figure 1.2). Chapter 4 presents the stakeholder participation and decentralisation policies in Ghana. Chapter 5 focuses on the Ghana water policy. Chapter 6 looks at stakeholder participation and water resource protection in the basin and community levels. Chapter 7 is devoted to potable water delivery at the basin and community levels whilst Chapter 8 examines the influence of the socio-cultural and economic environment on stakeholder participation in the Densu Basin. Chapter 9 handles the conclusions, answers to research questions as well as implication for stakeholder participation theory and provides recommendations.



**Figure 1.2 Structure of the Thesis**



## 2 Concepts of Stakeholder Participation

### 2.1 Introduction

Stakeholder participation, according to observers (Voinov and Bousquet, 2010; Mikkelsen, 2005), is one of the ‘buzzwords’ in development discourse used widely by policymakers, development agencies, academics and practitioners. It has become a key element in development and management issues. However, it is a diffuse concept with varied interpretations by different stakeholders. This chapter reviews the literature on the concept of stakeholder participation in an attempt to address the overall question: what does the literature say about the concept of stakeholder participation, what does it entail and how are the elements related to each other? The specific questions answered in this chapter are: how does participation feature in the development discourses? How is stakeholder participation linked to the related concepts of decentralisation, democracy and good governance? Why is stakeholder participation important in policymaking? What theories explain stakeholder participation?

The chapter begins with the overview of literature (Section 2.2), Section 2.3 deals with participation in development discourses, and Section 2.4 relates the stakeholder participation discourse with the concepts of democracy, decentralisation and good governance. The concept of stakeholder participation and an elaboration of its key characteristics are covered in Section 2.5. Section 2.6 is devoted to the theories that underpin stakeholder participation. The last Section (2.7) presents summaries and conclusions of the chapter.

### 2.2 Overview of the Literature

There are indications that discourses on participation in the development literature started in the 1960s (Bulkeley and Mol, 2003). Participation gained popularity in the 1970s due to the implementation challenges associated with the hierarchical approach to development practice (Mohan, 2008; Webler and Tuler, 2001; Lekunze, 2001; Lammerink et al., 1999). This popularity emanated from the perceived strengths and attractiveness of participation. The two main approaches to participation identified in the literature are the transformative approach (Mohan, 2008; Hickey and Mohan, 2005; Bell, 2004; Chambers, 1997) and the instrumental approach (Neef, 2008; Mohan, 2008; Hooper, 2005; Mayo and Craig, 1995). Participatory approaches, it was explained, have the potential of delivering genuine social transformation but the conditions allowing transformative participation and the kinds of politics that underline such approaches have to be defined and examined (Hickey and Mohan, 2005; 2004). Critics of participatory approaches however, argue that the presentation of participation as a radical transformation of societal structures, politics and economics has no evidence (Hickey and Mohan, 2005; Mosse, 2004; Bell, 2004; Cleaver, 2004; 1999).

### 2.3 History of Participation in Development Discourses

While all countries aim to develop, the development discourse focuses on the gap between developed and developing countries and aims at finding a way to accelerate the

development process in the developing countries. Development is argued to be a participatory process (Stiglitz, 2002). Within this context, participation is seen as a key ingredient in development, though the relationship between participation and development remains complex.

Table 2.1 summarises the important landmarks in the development discourse relating to development cooperation and participation over six decades, starting from the 1950s. Each decade focused on a particular development approach and a corresponding notion of development cooperation with emphasis on different aspects of stakeholder participation.

The industrialised countries became concerned about the problems of underdevelopment after World War II in the 1950s, which left large parts of Europe destroyed. This era marked the origins of the modernisation theory of development. The goal of development therefore was to increase gross domestic product (GDP) through investments in large-scale industry and infrastructure and exploitation based on the notion of economies of scale (Gupta and Thompson, 2010). The focus was on, differences in the level of technology in the developed and the developing countries. Foreign (development) assistance took the form of technology transfer as a means to fill this technology gap (see Table 2.1). People of less developed countries were to adopt the new technology so transferred (Cohen and Uphoff, 1980).

Development thinking in the 1960s was centred on capital-investment growth models (Cohen and Uphoff, 1980). The focus of development efforts shifted to a concentration on how to address resource gaps, between government revenue and expenditure, and individual savings and investment. Fiscal capital formation was considered an important element for development. The general expectation was for citizens to gear their productive efforts towards export markets, pay taxes on profits accrued and invest whatever incomes they were able save. During this period, the goal of participation was the involvement of people in resource provision such as labour or cash (Nelson and Wright, 1995).

According to Reed (2008), the opponents of modernisation theory of development started in the late 1960s to criticise large-scale technological transfers as a means of promoting development (see van Tatenhove and Leroy, 2003). Their argument was that development programmes produced limited benefits because it had been capital instead of people centred. Government or agency staff undertook projects most often. An elitist class, who, it was believed, had certain expertise and knowledge, designed such projects whilst the majority of the people were seen as unskilled and not well informed (Chambers, 1997; Oakley, 1991).

From the 1950s to the early 1970s development was considered possible only by emulating the ways of the “developed” countries – their aspirations, values, culture and technology. The Third World was thus expected to assimilate and gradually assume the qualities of the industrialised nations (Mohan, 2008). In this sense, participation was perceived to be passive, and included only few people. To participate in the management of national resource flows therefore required a person to be highly trained and technologically skilled (Richards et al., 2007; Burkey, 2002; Rashman, 1991; Cohen and Uphoff, 1980).

**Table 2.1 Evolution of Participation in Development Discourse**

Period	Dominant development discourse	Direction of development cooperation	Notion of participation
1950s	Increase GDP based on theories of big push; balanced growth; take off into sustained growth.	Technology transfer.	Adoption of new technology.
1960s	Capital-investment growth models.	Export promotion; foreign aid; regional integration.	Labour, cash or in-kind contribution by people. People to pay taxes, produce more for export, save and invest.
1970s	Paradigm shift from top-down to bottom-up; decentralisation and localisation of development process. Increase per capita GDP. Emphasis on non-monetary indicators.	Pursued basic needs approach.	Recognition of local knowledge as an essential input in development planning. Communities to take part in provision of essential services.
1980s	Domination of neo-liberal market theory. Promotion of endogenous growth; rural development.	Conditional aid used to redesign national policies (e.g. structural adjustment programmes); trade liberalisation.	Concept of community participation in development advanced. Private sector participation encouraged.
1990s	Participation adopted at multiple levels as a basic policy measure in development strategy. Enhance social and human capital.	Foreign aid emphasised basic needs, humanitarian assistance and good governance.	Two-way interaction between decision makers and the public. Participatory approaches criticised for overlooking the complexities of power structures. Promote stakeholder participation.
Since 2000  Since 2002	Shift from project-based participation in development towards participation as an element of citizenship and improved governance. Promotion of sustainable development and human dignity.	Public participation as a requirement for foreign aid. Emphasis on foreign aid for development and environment, to countries with good governance; and country ownership of policies.	Decision-making based on participation, rather than imposition from outside.

Source: Based on Gupta and Thompson (2010); Razzaque (2009); Riddell (2007); Khanal (2006); Garande and Dagg (2005); Hickey and Mohan (2005; 2004); Abelson et al. (2003); Brett (2003); Campbell and Vainio-Mattila (2003); Burkey (2002); Thérien (2002); Abrams (2001); Pronk (2001); Kleemeier (2000); Gaventa and Valderrama (1999); Manikutty (1998); Chambers (1997; 1996); Nelson and Wright (1995); Pretty (1995a, b); Cohen and Uphoff, (1980).

Citizens and stakeholder groups mounted pressure against traditional top-down decision-making (Jackson, 2001). The top-down non-participatory approach was seen to have been unsuccessful. For instance, they did not meet peoples' needs and disempowered the people. In developed countries such as the United Kingdom and the United States of America, public participation came to be of great academic and political concern as governments were seen not to be democratic enough in performing their roles as policymakers and policy implementers (Bulkeley and Mol, 2003).

The recognition of the inadequacies of total dependence on such non-participatory approaches to development led to the quest for alternative approaches, which focused on

reversing power relations from top-down to bottom-up, and from project-centred to people-centred (Oakley, 1991). Decision makers then began to consult the public on policy proposals or asked them to help with implementation. This shift also demanded incorporation of local ideas into research and recognition of local knowledge as an essential ingredient in development planning (Chambers, 1997; 1996; Pretty, 1995a, b). The people-centred approach is described as putting the last first and the first last and involving people in decision-making processes (Chambers, 1997; 1996). The move from project-centred to people-centred also captured as popular participation implied getting a large number of people: to provide public pressure; and to hold accountable those making decisions about the public (Nelson and Wright, 1995).

Attention was thus given to decentralisation and localisation of the development process. Stakeholders and the public thus influenced events from outside the policymaking process (Bulkeley and Mol, 2003) (see Table 2.1). Around this time, a structured form of public participation was seen in the planning and environmental regulations of some nations (Razzaque, 2009). Participation of non-state actors became obvious in various stages of environmental policymaking in the western developed countries.

By the mid 1970s therefore, a move for development alternatives that opposed the modernisation paradigm of development thinking was already underway. Others like Razzaque (2009); Khanal (2006); Osti (2004); Campbell and Vainio-Mattila (2003); Jennings (2000); and Lammerink et al. (1999) have reported such shifts in development paradigms. The basic needs approach to development was formulated in the 1970s and adopted by some international organisations such as the International Labour Organisation (ILO) in 1976 when the popularity of participation had gathered momentum. The ILO defines basic needs to include adequate food, shelter and clothing and certain household equipment provided by and for the community at large. The World Bank also argued for a basic needs approach which targeted marginalised groups. With this approach, the community was expected to take part in the provision of essential services (Burkey, 2002: 31; Nelson and Wright, 1995). Essential services identified included safe drinking water, sanitation, public transport, health and educational facilities. The United States Agency for International Development (USAID) was mandated by the US Congress to pursue a basic needs approach in 1973. The legislation directed the Agency to promote bottom-up development and participation of the poor (Kleemeier, 2000: 930). The idea was to provide public welfare services to ensure satisfaction of basic human needs with the poor in society getting involved in decision-making and implementation of development activities.

Though improvement of the physical environments of the poor was necessary it was found to be important first to tackle poverty by developing the abilities of people to have a say in, and have some influence on the forces that control their livelihoods (Clayton et al., 1997; Oakley, 1991). Since development programmes and projects had neglected the majority of the rural people (Chambers, 1997), it became necessary for development intervention to ensure that the neglected majority, the poor, had the chance to benefit from development initiatives as well as contribute to development efforts (Oakley, 1991; Cohen and Uphoff, 1980). It was around this time that Participatory Action Research (PAR), which aims at creating a learning atmosphere for people to articulate their needs and achieve development, was promoted by Freire (1970 sourced from Mohan, 2008).

Participatory development gained popularity around the same time as the neo-liberal counter-revolution with its discourse of self-help and individualism in the 1980s. The belief in not relying on the state (Brett, 2003) was thought to be the underlying factor of the increasing recognition of the importance of involving locals in the development process (Mohan, 2008). International NGOs argued that development should bring about more self-sufficiency rather than dependency on state provided services (Nelson and Wright, 1995). The concept of participation in rural development advanced in the 1980s emphasised community contribution in the form of unpaid labour to development as a key aspect of participation (Garande and Dagg, 2005). Private sector participation and endogenous growth were encouraged (Gupta and Thompson, 2010; Riddell, 2007). Emphasis on involving local people in the development process and community participation became almost a requirement in most donor-funded projects (Abrams, 2001; Manikutty, 1998).

The 1980s saw the implementation of structural adjustment programmes (SAP) in several countries with trade liberalisation as one of the main tenets of economic reform (Gupta and Thompson, 2010; Thérien, 2002; Pronk, 2001). Conditional aid was used to design national policies and governments were recommended to adopt popular participation as a basic policy measure in national development strategy. In 1988, an NGO proposal to the United Nations Programme of Action for African Economic Recovery and Development resulted in an international conference on Popular Participation in the Recovery and Development Process in Africa. This was held in Arusha, Tanzania in February 1990 (see Appendix II for the objectives of this conference). The conference argued for development that is human-centred and participatory in nature. To achieve this there is the need to redirect resources to satisfy the critical needs of the people. This, the conference insisted, would facilitate the achievement of economic and social justice and the empowerment of the people to determine the direction and content of development. The outcome of this conference<sup>4</sup> was the adoption of the African Charter for Popular Participation in Development and Transformation. The Charter gives recommendations for effective participation in development in the form of strategies, modalities and actions for the various stakeholders in the development circle as well as indicators for monitoring the implementation of the recommendations. The indicators are listed in Box 2.1 below.

In the 1990s, the debate on participation centred on approaches that emphasise two-way interaction between decision makers and the public as well as consultations among participants (Abelson et al., 2003). The emphasis was placed on public sector provision of services with democratic accountability and cooperation with communities (Brett, 2003). Governments were thus under pressure to adopt participation to influence policy and planning at different governance levels (Gaventa and Valderrama, 1999). This meant the inclusion of local communities in the selection, design, planning and implementation of projects that were intended to benefit them (Mikkelsen, 2005). Participation in the form of public hearings and public comments was regarded as a key element to successful development decision-making (Kuhn, 1999; McCormick, 1995 cited in Razzaque, 2009: 355). Foreign aid emphasised basic needs, humanitarian assistance and good governance (Thérien, 2002).

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<sup>4</sup> The International Conference on Popular Participation in the Recovery and Development Process in Africa, 1990, Arusha, Tanzania.

A fundamental critique against the participatory turn in international development started from the mid 1990s. The critique was that participatory approaches often failed to achieve meaningful social change, because they failed to confront issues of power and politics and there was insufficient evidence of empowering outcomes (Hickey and Mohan, 2004; Mosse, 2004).

**Box 2.1 Indicators for Monitoring the Implementation of Effective Participation in Development**

- a) Literacy rate.
- b) Freedom of association.
- c) Representation of the people and their organisations in national bodies.
- d) The rule of law and social and economic justice.
- e) Protection of the ecological, human and legal environment.
- f) Press and media freedom.
- g) Number and scope of grassroots organisations with effective participation in development activities, producers and consumers cooperatives and community projects.
- h) Extent of implementation of Abuja Declaration on women (towards participatory development of African women in development in the 1990s).
- i) Political accountability of leadership at all levels.
- j) Decentralisation of decision-making process and institutions.

Source: Extracted from the African Charter for Popular Participation in Development and Transformation, Arusha, 1990, pp. 21-22.

The period, starting from 2000, witnessed promotion of decision-making based on participation as the key objective of development practice, rather than as an external imposition (Brett, 2003). Public participation as well as good governance increasingly became a requirement for loans and financing by international financing bodies (Razzaque, 2009). Good governance is seen as necessary for development (UNESCAP, 2009). Decentralisation is still on the development agenda (Grindle, 2007; Grävingholt et al., 2006). How stakeholder participation is linked to the concepts of good governance, decentralisation and democracy is examined in the next section.

## **2.4 Participation in the Context of Democracy, Decentralisation and Good Governance**

### **2.4.1 Introduction**

One of the concerns of development practices has been what is generally termed the democratic deficit, the tendency for development interventions to exclude the public in the conception and implementation of projects designed for their benefit. This section discusses how stakeholder participation is related to the concepts of democracy, decentralisation and good governance.

### 2.4.2 Explaining Democracy

Democracy in the modern sense<sup>5</sup> was developed during the nineteenth century (Yusuf, 2006). In a limited sense it is defined as a system of representative government in which representatives are chosen through free competitive elections and in which most citizens are entitled to vote (Schmitter and Karl, 2009; Yusuf, 2006). Other scholars (Schmitter and Karl, 2009; Diamond et al., 1995) add that citizens and their representatives hold leaders or rulers accountable for their actions in the public realm. Further, Schmitter and Karl (2009) argue that democracy must be viewed as something more than a struggle for election and re-election among competing candidates; and that citizens must be able to influence public policy, between elections, through non-electoral means, such as interest group associations, social movements, and locality groupings. In a broader sense, therefore, democracy is defined as a form of self-governance in which citizens hold the right to govern themselves. There is broad participation in the choice of leaders and policies, and in the allocation of societal resources; as well as a high degree of civil, political, and economic liberties (Brinkerhoff, 2000). The norms that condition how rulers come into power; the practices that hold them accountable for their actions; and the ability of citizens to influence public policy distinguish democracy from other systems of governance.

Definitions of democracy emphasise the equal right of citizens to take part in shaping collective decisions in an environment of open deliberation (Smith, 2009; Hague and Harrop, 2007) thus aiming at political equality. The democratic mechanisms are expected to allow local actors to articulate needs and collectively derive appropriate responses based on options and preferences (Du Toit et al., 2011). The representation of all affected interests during participation may increase the democratic content of the decision-making process and improve the quality of decision making (Mostert, 2006; 2003; Bulkeley and Mol, 2003).

Different components of democracy can be mixed by governments to create diverse forms of democracies. Democracies vary in the extent to which they encourage consensus as against competition, shared power as opposed to majoritarian rule, and public authority or private action. They also differ in the levels of citizen participation, citizen access to power, checks and balances, governmental responsiveness, and the quality of political pluralism (Schmitter and Karl, 2009).

Participation in turn addresses the democratic deficit in governance (see Figure 2.1 for illustration of the linkage). An underlying principle of participation is to empower citizens and stakeholders with an appropriate degree of voice or give them a chance to participate in shaping the decisions that affect them (Gough et al., 2003; Kujinga, 2002; Webler and Tuler, 2001; Narayan, 1995). This principle of participation is a democratic ideal; it also establishes clear procedures for decision-making (Leach, 2004). Active or intensive participation of people is therefore assumed to be a characteristic of democracy (Gough et al., 2003) (see 2.5.7).

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<sup>5</sup> Democracy comes from a Greek word. In the Greek democracy, only a small minority of the adult population was granted the right of political participation, which was achieved through direct vote on issues. These ideals are quite different from the modern democratic system, which is based on majority rule and representative government (Yusuf, 2006).

### 2.4.3 Explaining Decentralisation

In the 1980s international development agencies and financial institutions, particularly the World Bank and academics supported decentralisation in developing countries (Grindle, 2007; Larson and Ribot, 2004; Work, 2002; Totemeyer, 2000; World Bank, 2000). Sixty-three out of the seventy-five developing countries with more than five million inhabitants are pursuing decentralisation policies that devolve functions and responsibilities to local governments (Helmsing, 2002 cited in ActionAid, 2002; Gaventa and Valderrama, 1999). Most African countries have implemented decentralisation programmes since the 1980s. Morocco started implementation in 1986 (Work, 2002; UNDP, 2002); Botswana and Nigeria in the early 1990s (Wunsch, 2001); and Kenya and Uganda in 1995 (Devas and Grant, 2003). Malawi in 1998; (Ferguson and Mulwafu, 2004); Mali in 1999 (Hetland, 2007); Tanzania in 1999 (Fjeldstad, 2001); Benin in 2002 (Mongbo, 2008); and in Ghana decentralisation was introduced in 1957 after independence and reformed in the 1980s (Ayee, 1994).

Decentralisation involves transfer of resources, public service responsibilities as well as the power of central government to make decisions either to lower levels of government, to dispersed central state agencies, or to the private sector, NGOs, community organisations or resource user groups (Ahwoi, 2010; Kemper et al., 2007; Grävingholt et al., 2006; Goldfrank, 2002; Kujinga, 2002; Work, 2002; Wyckoff-Baird et al., 2000).

Decentralisation is built on the following premises: first, government is made more responsive to local needs and preferences because local actors are better able to develop policies that suit local circumstances (Grävingholt et al., 2006; Work, 2002). The close contact of local actors with the citizens puts them in a position to have access to information on local preferences. Second, decentralisation improves service provision (Ahwoi, 2010; Helmsing, 2002 cited in Smits et al., 2009; Kemper et al., 2007; Francis and James, 2003; Goldfrank, 2002). Preferences and patterns of demand for public services differ spatially and are more effectively met by responsive local government. Unique local circumstances can be reflected in development plans and their implementation by decentralisation. The central provision of local public services, which tend to be uniform throughout a country, is likely not to satisfy anyone. Decentralised provision of local public services is likely to adjust to public demands (Ahwoi, 2010) because decision-makers are in close contact with the citizens and therefore information on local preferences is more available to them.

Third, decentralisation can bring government closer to the people (Cohen and Davidson, 2011; Lane et al., 2004; UNDP, 2002) to tap the creativity and resources of local communities. The citizens, in turn, are more effectively engaged in policy decision-making arenas (Du Toit et al., 2011; Grindle, 2007; Grävingholt et al., 2006). Participation in identifying, designing, implementing and managing projects and programmes improves development planning especially in rural areas from local expertise. There is increased likelihood of new ideas and practices being taken up and added to the resources available to development programmes (Ahwoi, 2010). Fourth, decentralisation can enhance legitimacy, power and grassroot support (Mongbo, 2008). Participation strengthens stability since people become satisfied that their needs are being taken into account (Ahwoi, 2010). Fifth, local actors are more easily held accountable than those in the central government for outcomes of their actions and inactions by the



citizens (Du Toit et al., 2011; Grindle, 2007; Kemper et al., 2007; Francis and James, 2003; Bardhan and Mookherjee, 2006). Sixth, decentralisation aims to address the shortcomings of the top-down approach – namely poor links with local values, knowledge, priorities and realities, and poor effectiveness (Wilder, 2009; Mohan, 2008; Fraser et al., 2006; Leach, 2004; Lekunze, 2001; Webler and Tuler, 2001).

Further reasons why governments pursue decentralisation include: (a) pressure from external donor agencies or international institutions (e.g. Ghana experience, 4.2.1); (b) low levels of economic development or macroeconomic instability (Grindle, 2007; Work, 2002); and (c) as part of a process of national reform and reconstruction. Others are (d) non-state domestic pressure (e.g. Ghana's experience, see 4.2.1); (e) the search for new paradigms of governance by state officials; (f) decline in state resources resulting in increased pressure for economic, institutional (public sector) and political reforms; and (g) growing urbanisation (Olowu, 2003; Devas and Grant, 2003; Smoke, 2003). Other reasons are (h) partly as a disguise for renewed attempts by national political elites to expand their control through developing new local institutions or restructuring existing ones (Smoke, 2003); and (i) pressure to redistribute responsibilities because of declining financial capacity of the central government to local government and private sector (Finger-Stich and Finger, 2003).

There are three broad types of decentralisation, namely political, administrative and fiscal decentralisation. Political decentralisation usually refers to situations where political power and authority is transferred to sub-national authorities. Most often, it is in the form of elected and empowered sub-national government (Grävingholt et al., 2006; Work, 2002). Administrative decentralisation is concerned with transferring decision-making authority, resources and responsibilities for the provision of selected number of public services from the central to lower levels of government, local agencies, and field offices of central government line agencies (Grävingholt et al., 2006; Work, 2002). Fiscal decentralisation refers to the fiscal resource reallocation, and transfer of authority to sub-national levels of government to make expenditure decisions; revenue generating powers including authority over budgets and financial decisions. The forms it can take include transfers of revenues from central to local government; expansion of local revenues through taxes; and indirect charges that remain in the local budget. There are some democratic implications in fiscal decentralisation, especially where control is in the hands of elected politicians (Crawford, 2004b).

Decentralisation can take several forms; however, the four major forms selected for discussion are devolution, deconcentration, delegation and divestment. Devolution refers to the full transfer by central government, of responsibilities, decision-making powers, resources and control of government agencies to public authorities at lower levels; and democratically elected councils at local and intermediate levels. There is power sharing between the central government and sub-national authorities. The sub-national authority is recognised as an independent legal entity and given legally defined areas of competence within which it has autonomy to tax and spend (Grävingholt et al., 2006; UNDP, 2002; Work, 2002; Crook and Manor, 1998). The activities of the sub-national authorities are often not under the direct control of the central government (Gasper, 1991 cited in Kujinga, 2002: 898). Devolution is a form of political decentralisation. Devolution, if fully implemented, represents democratic decentralisation (Crawford,

2004a). The lower-level authorities to whom resources, tasks and decision-making power are transferred are democratically elected and are downwardly accountable to the electorate (Lane et al., 2004).

Deconcentration is a form of administrative decentralisation. It refers to the transfer of authority and responsibility from one level of the central government to another level. The central government does not give up any authority; it rather relocates its officers to sub-national branches of government ministries or agencies in the national territory. The scope of central government is extended to strengthen its authority by moving executive agencies controlled by the centre down to lower levels of governance (Work, 2002; Kokor and Kroës, 2000; Crook and Manor, 1998). Deconcentration maintains upward accountability of decentralised groups to higher levels of government (Grävingholt et al., 2006; Brannstrom, 2005; Brannstrom et al., 2004; Work, 2002). Brannstrom (2005) and Brannstrom et al. (2004) explain that the decentralised groups remain disconnected from local populations and elected local government representatives. Unlike devolution or democratic decentralisation, deconcentration does not allow participation of local people or citizens in decision-making processes. The local people have no power or control over government agencies and as such, the local people cannot hold these agencies accountable.

Delegation is another form of administrative decentralisation involves, assigning authority and responsibility to local units of government or agencies that are not necessarily branches or local offices of the delegating authority. They could be semi-autonomous central government organisations. Accountability is upward to the delegating central unit but there is some downward accountability to the sub-national level units to which power is assigned (Work, 2002; Kokor and Kroës, 2000). Divestment or privatisation is when public sector functions are transferred from central government to voluntary, resident communities of particular areas, private or non-governmental institutions with clear benefits to, and involvement of the public. It usually entails contracting out partial service provision or administrative functions, deregulation or full privatisation (Work, 2002; Kokor and Kroës, 2000).

There are criticisms mounted against decentralisation. The first is that decentralisation may burden local governments by shifting decision making and financing from central to local government (Smits et al., 2009; Kemper et al., 2007; Goldfrank, 2002). Administrative responsibilities as well may be transferred to local levels without adequate financial resources. These create problems as local governments invariably lack administrative and technical capacities and resources to provide efficient and effective services (Smits et al., 2009; Faguet, 2003). Second, decentralisation is costly as it raises administrative expenses by requiring trained personnel to accept authority at lower levels and to cope with new responsibilities.

Third, decentralisation threatens national unity by reinforcing narrow, sectional interests. Decentralisation can increase disparities between regions and between cities depending on how resource allocation mechanisms are structured (Ahwoi, 2010). Similarly, by reducing the size of service areas and, possibly, by making them more homogeneous, decentralisation process tends to limit the potential for cross subsidies and leaves low-income segments of the population without access to services (Solanes and Jouravlev, 2006).

The fourth is that decentralisation demands bottom-up approaches. However, bottom-up approaches are expensive because many people are involved and money is needed in bringing many people together. Many of the people do not understand the issues, as they are not experts (Bamba, 2006). Time is consumed as well in preparation and implementation resulting from the need to consult stakeholders; bring stakeholders together; and negotiate with them (Irvin and Stansbury, 2004).

In decentralised approaches, stakeholder participation assumes that stakeholders see the benefits of participating in decision-making and that they have the opportunity to influence the outcomes of a participatory process. Therefore, in situations where the people still perceive the central government as the body to provide solutions, decentralisation may not work (Du Toit et al., 2011).

Despite the weaknesses outlined stakeholder participation is claimed to be more effective in decentralised environments (Jaspers, 2003; Wyckoff-Baird et al., 2000). Decentralisation is usually assumed to provide better opportunities for participation by local communities in decision-making by opening up new channels for citizens' input and at the same time expanding their voice in local government through their elected actors. It also involves encouragement of participation in the management or ownership of assets, resources and services. Some degree of citizen participation likewise is a precondition for successful decentralisation (Work, 2002; Oyugi, 2000). Participation is seen as a context within which power sharing (for successful decentralisation) takes place between the centre and the localities in the decision-making process (Oyugi, 2000). Participation and decentralisation are linked together and their combination is key to improving government performance, activating citizens and deepening democracy (Goldfrank, 2002) (see Figure 2.1 for illustration of the inter-linkages).

#### 2.4.4 Clarifying Good Governance

Governance is defined variably in the literature. For one group governance encompasses structures and mechanisms that individuals and institutions, public and private, use to manage their common affairs according to accepted rules and procedures (Franks and Cleaver, 2007; Schmitter, 2002; Brinkerhoff, 2000; European Commission, 1995). A second group defines it as the mechanisms and processes by which responsibilities, power or decision-making is shared or distributed between different actors or stakeholders such as government, civil societies, the private sector, institutions and individuals (UNESCAP, 2009; Béné and Neiland, 2006). For a third group "governance comprises the complex mechanisms, processes and institutions through which citizens and groups articulate their interests, mediate their differences and exercise their legal rights and obligations" (Work, 2002: 3; UNDP, 2002; European Commission, 1995). The definitions imply that governance focuses on the inter-relationship between multiple stakeholders - governments, civil societies and the private sector and accommodates the interests and expectations of the majority. According to UNESCAP (2009), the stakeholders involved vary depending on the level of government that is under discussion.

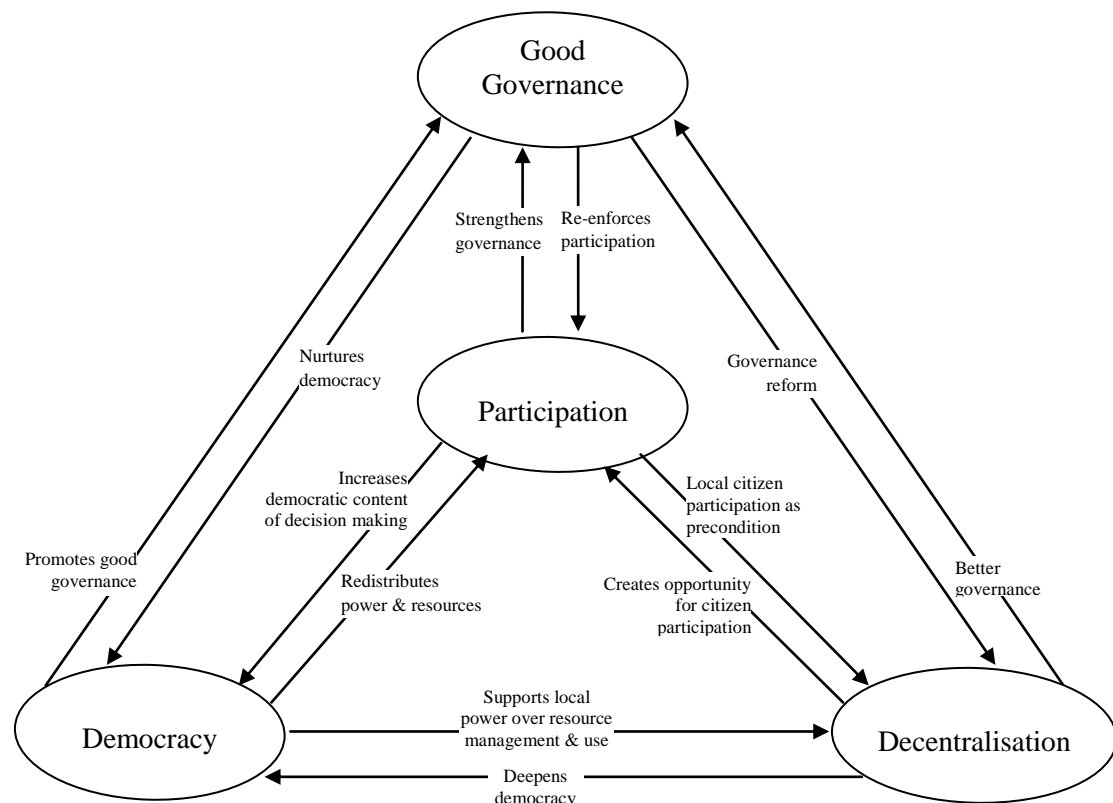
Good governance is making governments more accountable and more open and transparent. At the local level, it is argued that good governance improves the efficiency

of public services; heightens accountability; and deepens democracy by complementing representative forms with more participatory modes (Gaventa and Valderrama, 1999). Good governance sets in motion structures and processes for minimising corruption and enhances the potential for the views of minorities and of the most vulnerable in society to be heard in decision-making processes. It improves institutional responsiveness to the present and future needs of society (UNESCAP, 2009; Work, 2002).

The characteristics of good governance that are agreed on by most scholars are participation, accountability and transparency (Béné and Neiland, 2006; Resurreccion et al., 2004; Poluha and Rosendahl, 2002; Gaventa and Valderrama, 1999). Other characteristics include responsiveness, legitimacy (UNESCAP, 2009; Beierle and Konisky, 2000), rule of law (Poluha and Rosendahl, 2002), effectiveness and efficiency, inclusiveness, equity and consensus oriented (UNESCAP, 2009; Work, 2002). Participation is considered a characteristic of good governance and at the same time a mechanism that improves the quality of governance (Von Korff et al., 2010; UNESCAP 2009; Enserink and Koppenjan 2007; Enserink et al., 2007; ESW, 2007; Béné and Neiland, 2006). Good governance in turn re-enforces participation.

#### 2.4.5 Inferences

There are inter-linkages between the concepts participation, democracy, decentralisation and good governance. Figure 2.1 illustrates these inter-linkages.



**Figure 2.1 Links between Participation, Democracy, Decentralisation and Good Governance**

Oyugi (2000) argues that decentralisation is a governance reform in that good governance involves a situation of power sharing between the centre and the sub-national units of

government in the decision-making process. Decentralisation is seen as a prerequisite for good governance because of its supposed effect on the distribution of power between different actors (the centre and the localities) in the decision-making process (Béné and Neiland, 2006). As a policy component to improve governance in developing countries, democratic decentralisation is therefore promoted for deeper participation of citizens (Kokor, 2006; Crook and Manor, 1998).

Stakeholder participation is supported by decentralised governance structures. Participation addresses democratic deficit in decision-making and improves the quality of governance. The decentralised structures facilitate the democratisation process of inclusion, transparency, popular control or empowerment among others. The implication is that stakeholder participation is effective in an environment where good governance is upheld. The principles of participation are therefore closely and necessarily linked to good governance. These principles are discussed in the next section.

## **2.5 What is Stakeholder Participation?**

This section first defines who a stakeholder is and discusses what stakeholder participation entails. It covers the goals and principles of stakeholder participation (2.5.3) as well as stakeholder empowerment (2.5.4). Participatory approaches and methods are discussed followed by levels of stakeholder participation (2.5.5 to 2.5.7). Finally, the Section integrates the elements of stakeholder participation in 2.5.8.

### **2.5.1 Stakeholder Defined**

The literature from both the scientific and policy world presents a variety of ways of defining a stakeholder with emphasis on four main features. Table 2.2 below presents these main features and their corresponding authors. The first identifies stakeholders as individuals or groups who are affected directly (positively or negatively) by a decision or a consequence of a decision (Jansky et al., 2005; Dube and Swatuk, 2002). The second states that stakeholders are those who have the ability (either directly or indirectly) to influence a decision or an outcome (Glicken, 2000; Mirghani and Savenije, 1995). The third identifies stakeholders in relation to a situation or a specific issue such as water management (Pahl-Wostl, 2002; Glicken, 2000; World Bank, 1996). In the fourth, those with legitimate concerns or interest in certain issues or decisions, such as the distribution of resources, benefits, losses or inputs, are the stakeholders (SADC, 2010; Mikkelsen, 2005; Barrow et al., 2002; Short and Winter, 1999).

**Table 2.2 Summary of Main Features in the Definitions of Stakeholders**

Main features of stakeholders	Authors
Are <i>affected/influenced</i> by the issue under consideration	Jansky et al., 2005; Dube and Swatuk, 2002; Glicken, 2000; World Bank, 1996; Mirghani and Savenije, 1995
Have <i>power/ability to impact</i> on the problem definition or decision	Jansky et al., 2005; Glicken, 2000; World Bank, 1996; Mirghani and Savenije, 1995
Are identified in reference to a <i>particular issue</i>	Dube and Swatuk, 2002; Pahl-Wostl, 2002; Glicken, 2000; Short and Winter, 1999; World Bank, 1996
Have <i>stake/concerns/interest</i> about the issue under consideration	SADC, 2010; Mikkelsen, 2005; van de Kerkhof, 2004; Dube and Swatuk, 2002; Short and Winter, 1999; ODA, 1995; Welp et al., 2006

### *Categorising stakeholders*

Three main forms of categorising stakeholders can be distilled from existing literature. These include whether the stakeholders influence or are affected by the decision; levels of interest in an issue or decision and the amount of power they command; as well as the role they play in the project or decision-making process. The first classification groups stakeholders as primary or secondary stakeholders. Those ultimately affected or expected to directly benefit from a decision or project are primary stakeholders, while secondary stakeholders influence the decision (Mikkelsen, 2005; ODA, 1995).

The second classification of stakeholders based on the different levels of interests and the amount of power or influence they have on the decision and problem definition gives rise to four groups (Reed et al., 2009; Eden and Ackermann, 2004). These are:

- a) Subjects also described as primary stakeholders or bystanders – those who have high interest but least power to influence the problem definition. They are the people affected by the problem or its solution. They are usually local communities.
- b) Key players, secondary stakeholders and actors have high interest and power to influence the problem definition and solution. They include government officials.
- c) Crowd, external stakeholders and bystanders have less interest and are unaffected by the problem or its solution yet they may be indirectly concerned with the specific issue. They are the general public.
- d) Context setters, external stakeholders and actors have low interest but have considerable power in influencing the problem definition. They are the referees who are social actors such as journalists, researchers and politicians. They set the context within which decisions are made.

A third classification groups stakeholders into three based on the role they play in the project. They include technicians, largely comprising of scientists or researchers and policymakers including government agencies and officials, and the elites with political power. The third group, the primary stakeholders are made up of communities (local inhabitants and ‘beneficiaries’), citizens, NGOs and businesses (Soneryd, 2004; Rosenberg and Korsmo, 2001; Glicken, 2000).

In this research, stakeholders are conceived as individuals or groups that have interest in or are affected by and/or have ability to impact directly or indirectly on the problem

definition, decision or the issue under consideration, which is water management. Going by the first form of classification of stakeholders because of its simplicity of having two basic categories, primary stakeholders in this research are the communities, beneficiaries or general public whilst secondary stakeholders are policymakers, politicians, technicians, experts or researchers.

### 2.5.2 Defining Stakeholder Participation

In defining stakeholder participation authors focus on different aspects. Some focus on stakeholders' involvement in providing knowledge, values and preferences into the decision-making process (Rowe and Frewer, 2005; 2004; Van Asselt Marjolein and Rijkens-Klomp, 2002). Few studies focus on the provision of tangible resources like money, labour or material in implementation processes of development projects as stakeholder participation (Prokopy, 2005; Resurreccion et al., 2004, Lise, 2000). Others focus on empowering stakeholders to exercise their democratic rights (Soneryd, 2004; World Bank, 1996; Arnstein, 1969). Another aspect is sharing in the benefits of the outcome (United Nation, 1979 sourced from Desai, 2008; Lise, 2000) or sharing resources (Blackburn et al., 2002) and receiving information (Blackburn et al., 2002). What runs through most of the definitions is that stakeholder participation is the involvement of stakeholders in decision/policymaking processes (see Table 2.3). The main processes by which participation can take place irrespective of the context and objective are two. These are the decision-making process and the implementation process (Desai, 2008).

**Table 2.3 Aspects of Stakeholder Participation Identified by the Scientific and the Policy World**

Aspects of stakeholder participation	Authors
Provision of inputs into decision-making processes	Rowe and Frewer, 2005; 2004; Van Asselt Marjolein and Rijkens-Klomp, 2002; Rydin and Pennington, 2000; United Nations, 1979 sourced from Desai, 2008; Arnstein, 1969
Power in hands of stakeholders	Reed, 2008; Soneryd, 2004; Brett, 2003; Blackburn et al., 2002; Van Asselt Marjolein and Rijkens-Klomp, 2002; Rydin and Pennington, 2000; World Bank, 1996; Arnstein, 1969
Involvement in decision/policymaking processes	De Stefano, 2010; SADC, 2010; Von Korff et al., 2010; Tijunaitiene et al., 2009; Anyidoho, 2008; Reed, 2008; Desai, 2008; Enserink et al., 2007; Mostert, 2006; 2003; André et al., 2006; Rowe and Frewer, 2005; 2004; Van Asselt Marjolein and Rijkens-Klomp, 2002; Beierle and Cayford, 2002; GWP, 2000; Lise, 2000; World Bank, 1996; ODA, 1995; Biswas, 1990; Cohen and Uphoff, 1980; United Nations, 1979 sourced from Desai, 2008; Arnstein, 1969.
Provision of tangible inputs into implementation processes	Prokopy, 2005; Resurreccion et al., 2004; Lise, 2000
Benefit and resource sharing	United Nations, 1979 sourced from Desai, 2008; Blackburn et al., 2002; Lise, 2000
Receipt of information	Rowe and Frewer, 2005; 2004

### *Stakeholder participation and public participation*

Some authors use the terms stakeholder participation and public participation interchangeably. Others distinguish between the two by the distinction between stakeholders and the public. They refer to stakeholder participation as involving the more specific or organised interests groups, people and institutions directly or indirectly affected by the issue in decision-making. While public participation is referred to as the direct participation of non-governmental actors including civil society groups, individual citizens, individual companies, public interests groups and economic interests groups in decision-making (Moellenkamp et al., 2010; Jansky et al., 2005; Mostert, 2003; Pahl-Wostl, 2002; World Bank, 1996) (see Table 2.4).

Another way of differentiating stakeholder participation from public participation has been the scale of participation. Public participation is “citizen participation involving the public at large in issues of general concern” (Moellenkamp et al., 2010; Pahl-Wostl, 2002: 5) whilst stakeholder participation is “involving specific stakeholder groups, the various groups are addressed in their specific roles and relative to their stakes in a particular ... issue” (Pahl-Wostl, 2002: 5) (see Table 2.4). Depending on the context, stakeholder participation may mean citizen participation, community participation, public participation and the participation of governmental and non-governmental bodies (Botes and Rensburg, 2000).

**Table 2.4 Stakeholder Participation Versus Public Participation**

Type of participation	Participants	Aim	Types of issue
Stakeholder participation	Participants with a stake or specific interest in the problem discussed.  More specific or organised interests groups.	Involve those affected by a decision and/or those able to influence the decision.	Specific issues.
Public participation	Broader collection of participants.  The general public/the public at large.  Non-governmental actors.	Increase attention to and include the interest of those usually marginalised.	Issues of general concern.

Source: Based on Moellenkamp et al. (2010); Jansky et al. (2005); Mostert (2003); Pahl-Wostl (2002); World Bank (1996).

This research regards stakeholder participation as a contribution of inputs into decision-making processes by stakeholders. Stakeholder participation is also considered as the act of influencing decision-making and implementation processes. These are associated with high degrees of stakeholder participation (see 2.5.7). Stakeholder participation is seen as involvement in the sharing of benefits or costs of outcomes by stakeholders, or as the contribution of tangible inputs such as labour, material and money into implementation processes. These are associated with low degrees of stakeholder participation (see 2.5.7).



### 2.5.3 Goals and Principles of Stakeholder Participation

#### *Goals of participation*

Three main goals of stakeholder participation identified in the existing literature are democracy, good governance and sustainable development. Earlier discussions have covered the link between participation, democracy and good governance. This section shows the link between participation and sustainable development. Allen (2007) and Richards et al. (2007) argue that stakeholder participation in decision-making is necessary for achieving sustainable development (see also Agenda 21, a product of the Rio Earth Summit of 1992). According to the World Commission on Environment and Development (WCED) sustainable development is ability to meet "... the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987: 43). There are three aspects of sustainable development. These are environmental or ecological sustainability, economic sustainability and socio-political sustainability. Economic sustainability and socio-political sustainability are embedded in good governance. This study then, refers to sustainable development as ecological or environmental sustainability.

Different authors identify ecological or environmental sustainability variably as the process of ensuring that the current processes of interaction with the environment are pursued with the idea of keeping the environment as clean as naturally possible based on ideal-seeking behaviour. Achieving ecological sustainability is the main purpose of IWRM (Cardwell et al., 2006; Giupponi et al., 2006; Rahaman and Varis, 2005). This entails that current water use is managed in a way that does not prevent future generations from obtaining the same quality of life from the same resource. This is accomplished through an appropriate balance between using the water to support livelihoods and conservation practices that allow the resource to sustain its functions and characteristics (GWP, 2000).

#### *Principles of participation*

The main principles of participation identified are: (a) accountability, (b) transparency, (c) inclusiveness, (d) legitimacy, (e) social learning, (f) conflict reduction, (g) effectiveness, (h) efficiency, and (i) equity.

Organisations are accountable to those who are affected by their (the organisations') decisions or actions in order to obtain good quality participation. Likewise, governmental organisations, private and civil society organisations are accountable to the public for effective participation. Downward accountability is the institutional mechanisms or processes through which executing agents or decision-makers are liable to be called to account by stakeholders or those who will be affected by their decisions or actions (UNESCAP, 2009). Downward accountability can broaden the participation of local populations and enhance the responsiveness of the empowered actors (executing agents, decision-makers or representatives) to those affected by the decisions or local populations (Agrawal and Ribot, 1999). Some of the mechanisms for strengthening accountability include election of local representatives; procedures for recall, third party monitoring such as by media and NGOs; political pressure and lobbying by associations; and public

reporting requirements (Béné and Neiland, 2006). Accountability cannot be enforced without transparency and the rule of law (UNESCAP, 2009).

Transparency is explained in five ways. First, it is making perfectly clear to the public or stakeholders what their role is and how their contribution will be handled during their involvement in participatory processes (Videira et al., 2006). Second, transparency in good governance implies allowing discussion and criticism of a government's or private company's policies, plans and activities (Poluha and Rosendahl, 2002). Third, transparency means that decisions are taken and their enforcement is done in a manner that follows rules and regulations. Fourth, it also means that information is freely available and directly accessible to those who will be affected by such decisions and their enforcement (SADC, 2010). Fifth, it requires the provision of adequate information in easily understandable forms (UNESCAP, 2009; Jansky et al., 2005). Openness is needed; secrecy only leads to suspicion distrust; and is destructive of community involvement (Reid, 2000). Participatory methods that may be employed for transparency are focus group discussions, citizen juries and public hearings as well as open forums (see 2.5.6).

Participation demands inclusion of all those interested in the issue (Bekbolotov, 2007; Hampton, 1999). One argument based on democratic legitimacy emphasises that all those who are influenced by management decisions should be included or given the opportunity to contribute to the decision-making process (Pahl-Wostl et al., 2007a). This ensures that all relevant interests are heard (Mostert, 2006). Bringing in all the different stakeholders to participate in decision-making increases transparency in the decision-making process and facilitates local people's acceptance of the decision made (Bamba, 2006; Mostert, 2003; Jonsson, 2005). However, limited resources can challenge efforts to ensure that all stakeholders are actively involved in the decision-making process (Funke et al., 2007).

Participation can be direct or by representation of various groups - such as the various interests, geographical, cultural and ideological groups (Buchy and Hoverman, 2000). Representatives represent the values and ideas of their groups and not just representation of the groups (Bulkeley and Mol, 2003). However, resource constraints may preclude participation by certain segments of society. Where there are different skill levels disparities in how effective each party represents their interest may exist (Smith, 2009; Leach, 2004).

Stakeholder participation nurtures legitimacy in that, when people are involved actively in planning and in decision-making, they feel committed to the decision made and this generates an increased sense of ownership (Bekbolotov, 2007; Placht, 2007; Mostert, 2006, 2003; UNDP, 2002). Legitimacy is interpreted as the moral basis for obedience to power (Parkinson, 2003). By involving stakeholders and communities in decision-making and implementation, they become responsible and accountable for the decisions made and the actions taken. There is greater acceptance of decisions; their sense of responsibility for implementing the decisions is also raised (Huitema et al., 2010; ESW, 2007; Bamba, 2006; HarmoniCOP, 2005; Jansky et al., 2005; Pahl-Wostl, 2002).

Legitimacy demands accountability and transparency on the part of representatives. When representatives are accountable to the people they represent, the people accept their decisions. Legitimacy is also achieved by building credibility for the authorities. Credibility in turn is achieved by authorities (a) being respectful to the public and open at every step (seeking out and valuing local knowledge and experiences shows respect for the public of the authorities and willingness to learn from the public); and (b) seeking

public approval for final action plans (Webler and Tuler, 2001). The participatory method that may be employed to obtain legitimacy is involving stakeholders in planning workshops (see Section 2.5.6). Legitimate decisions, policies and projects become popularly accepted and are more implementable. Legitimacy has instrumental value in that it makes political processes more efficient by reducing the cost of enforcing compliance. Decisions with low legitimacy are more likely to fail due to the associated lack of cooperation (Parkinson, 2003).

Another principle is social learning. Social learning is a means of developing and sustaining the capacity of different groups - authorities, experts, interest groups, and the public - to manage issues in which all members have a stake (Hoverman et al., 2011; Measham, 2009; Mostert, 2006; Keen et al., 2005). This includes the capacity to deal effectively with differences in perspective, to resolve conflicts, to make and implement collective decisions, to learn from experience and to achieve joint solutions (Pahl-Wostl et al., 2007a). For social learning to take place, it is necessary to have different stakeholders included in a decision-making process. As they deliberate over issues their interaction brings about social rationality where they get to know and respect their different attitudes and experiences as well as unique qualities and habits. The stakeholders experience change in their subjective understandings of each other and themselves. Their relationship with each other gets modified (Huiteima et al., 2010; Reed et al., 2010; Selman et al., 2010; Blackstock et al., 2007; Stringer et al., 2006; Jansky et al., 2005; Jonsson, 2005; Tippet et al., 2005; Leeuwis, 2000; Poncelet, 2001).

The learning component enhances the quality of, and support for, environmental decision-making (Bulkeley and Mol, 2003). The experts and decision makers seek and accept the opinions of the affected public. For instance in water resources management, communities have knowledge about their water resources concerning quantity, quality, usage and habitat. They can therefore share their knowledge, and with a better-shared vision and strategy, learn how to manage collectively for collective benefit and also deal with conflicting views and interests. A participatory method that may be employed to enhance social learning is focus group discussion (see 2.5.6).

Community involvement and social learning is also considered to reduce litigation and is therefore useful in resolving conflict among stakeholders (Pahl-Wostl et al., 2007a; Jonsson, 2005; Poncelet, 2001). The involvement of local communities and the utilisation of local knowledge in project design and implementation could assist in preventing anticipated conflicts (Dungumaro and Madulu, 2003). Participation at the early stages of policy development exposes potential disagreements early allowing for the institution of steps to resolve or minimise them through mutual negotiation (Lennox et al., 2011; Garande and Dagg, 2005; Rydin and Pennington, 2000). Effective public participation enables participants to be aware of values, which they had not previously considered, and enables opposing groups to consider or develop new values, which might resolve value conflicts (Beierle and Konisky, 2000; Hampton, 1999).

The four main issues that stand out in determining participation effectiveness are the levels of success, quality of the decision-making process, ownership and ability to meet the needs of stakeholders. In the first place, the extent to which an intervention has been successful in achieving its objectives is believed to underscore its effectiveness.

Participation enhances project success by allowing stakeholders to support administration and make available inputs of resources such as labour, skills and knowledge (Oakley, 1991). If stakeholders participate actively in project planning and implementation, they become committed to its success and their acceptance of new policies and technologies promoted by outsiders increases (Béné and Neiland, 2006). Secondly effectiveness means improved quality of decision-making process (Van Asselt Marjolein and Rijkens-Klomp, 2002; Glicken, 2000; Kasemir et al. 2000). Thirdly, effectiveness is equated with an increased sense of ownership. Contribution of resources by stakeholders develops their sense of project ownership (Bekbolotov, 2007; Bamba 2006; Jonsson, 2005; Mostert, 2003; Pahl-Wostl, 2002). Finally, effectiveness means meeting the needs of stakeholders. Participation allows stakeholders to have a voice in decision-making or in determining project objectives; their involvement, direct or indirect, then may result in a better match between what stakeholders want and what the authorities or project offers (Narayan, 1995).

The concept of efficiency in the context of sustainable development and good governance covers the sustainable use of natural resources and the protection of the environment (UNESCAP, 2009). Stakeholder participation, it is believed will lead to efficient use of resources. First, by helping to minimise misunderstanding or possible disagreement about project benefits; as a result highly paid professionals spend less time in explaining or convincing people of project benefits (Michener, 1998; Oakley, 1991). Secondly, the use of local labour and in-kind contributions to projects may lower implementation costs. This is seen as being cost-effective in that as the local people take responsibility for a project, there is a reduction in the dependence on expensive external resources required (Jansky et al., 2005; Mostert, 2003; Pahl-Wostl, 2002). However, cost-effectiveness often results in governments and agencies making fewer funds available for development work and indeed transferring the burden of project costs on to local people (Garande and Dagg, 2005; Oakley, 1991).

It is argued that stakeholder participation enhances fairness and justice and as such promotes equity. Equity involves the notion of fairness or a sense of justice in the decision-making process (Innes and Booher, 2004; Miller, 2004; Hofmann and Mitchell, 1998). The voices of the weaker, less advantaged or less powerful are not heard under normal circumstances. Participatory policy development and participatory decision-making processes involving real power sharing address equity issues (Miller, 2004). Equity ensures that measures, which discriminate in favour of the weaker and marginalised sections of the society, are applied and rules adopted lead to a result, which is just and fair (Cullet, 2009; Pahl-Wostl et al, 2007a; Mikkelsen, 2005; Innes and Booher, 2004).

#### *Potential benefits of stakeholder participation*

The discussion on the principles of stakeholder participation highlights the potential benefits pointing out the unique ability of stakeholder participation to improve the quality of decision-making processes and outcomes. The general perception is that public participation in decision-making leads to well-informed and more innovative decisions. In the same breadth the public gains new information and perspectives (De Stefano, 2010; Reed, 2008; Bekbolotov, 2007; ESW, 2007; Videira et al., 2006; Mostert, 2006, 2003; Jonsson, 2005; Bulkeley and Mol, 2003; Beierle, 2002; Pahl-Wostl, 2002; Rosenberg and

Korsmo, 2001; Leeuwis, 2000; Rydin and Pennington, 2000). The involvement of the public ensures that all relevant interests are heard and there is a more open and integrated government (Dougill et al., 2006).

The diversity of opinions and arguments provided by participants on an issue could lead to the development of a strategy to define management plans. Community participation could provide database, experience and ideas that could lead to practical, relevant and achievable solutions to problems. Involving communities allows the use of indigenous knowledge and opinions vital for protecting the environment, which includes the proper use of water resource use and their management. Irrigation systems are good examples. Local factors such as soil conditions, shifting water courses and water velocity are important considerations in their design and yet, external planners and engineers often lack detailed knowledge about these (Ostrom et al., 1994b; Acher and Healy, 1990). Participatory methods that may be employed for improving the quality of decision-making are focus group discussion; citizen juries, planning workshops and interactive web page (see subsection 2.5.6).

The potential benefits of stakeholder participation therefore include good governance (all relevant interests considered, open and transparent governance, accountability, conflict reduction, legitimacy and social learning); informed and innovative decisions; and gaining of new information and perspectives by stakeholders. In addition are effective and efficient outcomes of meeting the needs of stakeholders and success in achieving project objectives as well as easy implementation of decisions.

#### *Weaknesses of stakeholder participation*

The arguments for participation have been criticised as being stronger in rhetoric than in practice (Cooke and Kothari, 2001; Oakley, 1991). Those who are included in the decision-making processes determine the needs and issues at stake. However, the voices of those included may not accurately reflect the views and perspective of the society as a whole and frequently well-organised interest groups and people living near the location of projects are over represented. This may create problems (Mostert, 2003; Njoh, 2002; Botes and van Rensburg, 2000).

Often, difficulties in ensuring inclusiveness arises as some members of the communities are excluded from participatory processes because of the complexities in ensuring that all sections of the public are involved (Funke et al., 2007). Establishing the basis for objective selection when the number of potential stakeholders is too large for a participatory process can be elusive. Often the self-appointed individuals or the most visible, vocal, wealthier, the more articulated and educated groups are allowed to participate; without serious attempts to identify less obvious people (Buchy and Hoverman, 2000; Rydin and Pennington, 2000). Various reasons that leave out unorganised interests include the lack of trust in the authorities and a feeling that their inputs may not be taken seriously or the sheer volume of interests can also undermine their trust in the process. Marginalised interest groups often have limited resources such as financial resources for travelling to give their views, or buy relevant documentation to inform their participation. They may have little time as well. An example was found in a humanitarian aid project where attempts to involve all community members in project

activities failed to reach the poorer families leading to their underrepresentation because they happened to be at work (Global Study, 2003).

It is often very difficult to reach the poorest in informal settlements. Initiatives and leadership often come from people with higher social status in such settlements. The leaders in such settlements sometimes play a useful role as mediators or representatives of the poor stakeholders but limit their direct participation. A dominant local organisation may place itself between a development agency and beneficiary stakeholders. This behaviour by the more dominant groups often deprives the weaker and more vulnerable social segments of participation in community affairs. In some instances, a small elite group may take control and monopolise community level decision-making, obstruct attempts by authorities to engage directly with the beneficiary stakeholders and thus prevent them from participating (Njoh, 2002; Botes and van Rensburg, 2000). Support for the community in the form of resources gets passed to elites where communities are treated as socially homogenous (Mohan, 2008).

Though it has been argued earlier that stakeholder participation reduces conflict (Garande and Dagg, 2005; Dungumaro and Madulu, 2003) it has also been established that interaction between stakeholders can either impede conflict reduction or actually promote conflict (Mohan, 2008; Njoh, 2002; Botchway, 2001; Botes and van Rensburg, 2000). In heterogeneous communities, intra- and inter-group conflicts may arise from perceived or real differences. Differences in visions and objectives of engaging in a participatory process could be reasons for conflict among stakeholders. Very often different groups do not share a common vision and objectives regarding the future development of their community. What is perceived as negative by one interest group can have a positive meaning for another. Development introduces communities to limited scarce resources and opportunities. Certain forms of development interventions tend to prioritise the interests of certain groups over others. This very often increases the likelihood of development as a divisive force by introducing competition between groups for resources and power. Conflict is the likely outcome. The ensuing power struggles may erupt in conflict where the powerful try hard to retain their privileges and where the less powerful strive for increased control over their lives. Even the development agencies who supposedly promote participation are unwilling to release control.

In addition, there are arguments to the effect that participatory processes are time consuming and expensive (Richards et al., 2007; Irvin and Stansbury, 2004; Njoh, 2002; Botes and van Rensburg, 2000; Oakley, 1991). Project start-up may be delayed by negotiations with people whilst available time and financial resources may be limited. Participatory planning is time consuming and not cost-effective because participation in practice is always a slow and uncertain process and is likely to involve more paper work and soul searching (Buchy and Hoverman, 2000; Walters et al., 2000). Time is consumed in ensuring inclusiveness, equity and transparency and improving quality of decision-making. Time is also consumed in building consensus, conflict resolution, and dealing with trade-offs and holistic thinking (Armah et al., 2009). Time and money is needed in bringing all those who have stakes in the decision-making process; explaining expected roles of stakeholders and outcomes; discussing values, opinions and preferences of stakeholders; and training programmes and awareness creation to build capacity of stakeholders to improve decision-making.

There is also the risk that participation may not yield expected results and benefits (Von Korff et al., 2010; Richards et al., 2007), or even that it may bring about harmful consequences to a community or specific groups within a community. Production time spent on participation is something that often affects the poor, particularly women, who can ill afford to take time away from production to engage in meetings and other participatory processes. Participation may add to the work burden or decrease in leisure time as well (McGee and Norton, 2000). However, Salama and Alshuwaikhat (2006) argue that more time and money could be saved during the implementation and evaluation phases by replacing traditional enforcement activities with public participation (Jonsson, 2005) and; uncovering and overcoming problems early in time which would otherwise hinder implementation. Additionally, stakeholder participation ensures that people take ownership of projects (Botes and van Rensburg, 2000); and the costs mentioned do not take into consideration the social capital value the participants acquire (Irvin and Stansbury, 2004).

Over emphasis on local civil societies in participation may “leave important structures untouched and also do nothing to strengthen [nation] states and make the states more [effective and] accountable to their citizens”. For instance “it is very hard for a small co-operative in Africa to [impact on] the rules governing international trade when the World Trade Organisation (WTO) is dominated by participating developed economies” (Mohan, 2008: 49). Where as a nation state which is strengthened may have a voice at the international level.

With the emphasis on civil societies or NGOs as facilitators of participatory projects, funders channel large quantities of funds to such organisations. And because the monies involved are large and funders want to ensure that their monies are not ‘wasted’ but put to good use, “it is the better organised, the more acceptable or least scrupulous [organisation] which capture the resources ... weaker organisations are further undermined” (Mohan, 2002: 53).

Stakeholder participation has varying degrees of involvement (see subsection 2.5.7). It therefore throws a challenge as to the degree or level of participation stakeholders should be involved in policymaking (Cupps, 1977).

#### 2.5.4 Stakeholder Participation and Empowerment

The nature and intensity of participation are often measured in terms of power and roles that the different stakeholders have in the decision-making or development processes (Buchy and Hoverman, 2000; see also subsection 2.5.7). Since stakeholders are unequal in the power they possess meaningful participation entails acquisition of power by the less powerful to influence decisions that shape their lives (Desai, 2008). Empowerment as an outcome of participation encompasses skill development and provisions to enable stakeholders gain confidence and knowledge to manage issues, which have to do with their lives (Chambers, 1997; Sharp, 1995; Wilcox, 1994; Oakley, 1991). Empowerment also involves the enhancement of the decision-making role of stakeholders by enabling them have a say in or negotiate with existing development delivery systems; or decide upon and take actions, which they believe are essential to their development (Sharp, 1995; Oakley, 1991).

There are basically two types of empowerment: socio-political empowerment and economic empowerment. Socio-political empowerment allows stakeholders to gain some control over policy processes (Garande and Dagg, 2005; Irvin and Stansbury, 2004; Chambers, 1997) and ability to influence the content of decisions (Reed, 2008; Mohan, 2008; Blackstock et al., 2007; Tippet et al., 2007; Leach, 2004). Socio-political empowerment enhances dignity and self-sufficiency (Boateng, 2007; Oakley, 1991) and leads stakeholders to undertake self-initiated actions (Narayan, 1995). In economic empowerment, there is increased productive capacity or capital base of stakeholders, improvement in livelihoods, as well as increased income and material benefits and ability to meet basic needs (Oakley, 1991).

Empowerment therefore enables stakeholders to gain some control over policy processes; to decide and take actions; undertake self-initiated actions; acquire power to influence decisions as well as increase productive capacity. The transformative approach to participation, discussed in the next subsection, has the tendency of producing empowerment outcomes.

### 2.5.5 Approaches to Stakeholder Participation

The two main approaches to stakeholder participation identified in the literature, the instrumental and transformative approaches are not mutually exclusive. Either one or different combinations of the two can exist at the same time. The transformative approach to stakeholder participation is widely believed to enhance socio-political and/or economic empowerment of individuals or the society (Mohan, 2008; Hickey and Mohan, 2005; Bell, 2004; Chambers, 1997; Oakley, 1991). The transformative approach adopts people centred participatory processes. The transformative approach to participation is both a means and an end in itself. As a means, transformative participation is adopted to meet locally felt needs and priorities. As an end, the transformative approach to participation entails empowerment. The transformative approach relies on its inherent value as an empowering process that leads to enhancing stakeholders' management capacity, increasing confidence in indigenous potential as well as raising collective consciousness (Michener, 1998; Oakley 1991).

The transformative approach emphasises the processes of changing power relations between authorities and stakeholders (Neef, 2008). The transformative approach therefore leads to greater autonomy in decision-making, promotes self-reliance, which can result in direct participatory democracy, and redistribution of scarce resources. Decision-making autonomy refers to local people making crucial choices directly or through their organisations and, in addition, maintain control over financial and material resources. Friedmann (1992) as cited in Kujinga (2002) explains that self-reliance occurs when individuals or institutions develop adequate analytical, productive and the required organisational capacity to design and implement strategies that lead to an improvement in the conditions of the individual or the institution and its members. Transformative approaches, besides having empowerment outcomes are associated with decision-making processes and transparent participatory processes. In addition, accountability and legitimacy levels are raised.

The instrumental approach in contrast to the transformative employs participation as an instrument to achieve predetermined objectives or enhance policy outcomes (Neef, 2008; Hooper, 2005; Mayo and Craig, 1995). Participation becomes a way of using the existing



economic, physical and social resources of people to achieve the objectives of development programmes and projects. Participation provides the driving force for collective commitment for the determination of development processes and willingness by the people to expend their social energies for a project's execution. Stakeholder commitment to the project success develops their sense of ownership and the likelihood that actions will be implemented (Bekbolotov, 2007; Bamba, 2006; Jansky et al., 2005; Jonsson, 2005; Mostert, 2003; Pahl-Wostl, 2002).

In this context, instrumental approach utilises participation as a means to achieve an end (Nelson and Wright, 1995) with a planner-centred focus (Michener, 1998; Oakley, 1991). It is widely held that this approach provides a greater chance to ensure a more efficient use of resources available to development projects. The results of participation (the achievement of the predetermined objective) become more important than the act of participation. Most of the time governments and development agencies use participation as a means of delivering projects or for easy implementation of projects. People are mobilised and involved directly in the activities of the projects but participation ends once the activities are over (Oakley, 1991). Instrumental approaches are associated with project implementation processes and the likelihood of achieving project objectives.

Approaches to stakeholder participation have come under attack from several quarters (Hickey and Mohan, 2005; Bell, 2004; Cleaver, 2004; 1999; Mosse, 2004). Such authors argue that the participation discourse particularly the instrumental approach does not consider social, economic and power differences between people and overlooks the complexity of power structures within communities as well as in the wider governance regime. This promotes the use of participation by some agencies as mere rhetoric with limited or no empowerment and sustainability. They rather emphasise project delivery, improving the efficiency of projects and programmes and getting the process right in order to meet targets and achieve project success. Stakeholder involvement becomes a label for satisfying established demands for a project to take off or a mere 'rubber stamp' to show the agency's conformity to the participatory norm (Mohan, 2008; Dungumaro and Madulu 2003). In such situations power and decision-making remain with the implementing agency and not with stakeholders (Hauschildt and Lybaek, 2006; Wester et al., 2003). Participation then serves as an instrument in development projects rather than as a political tool of empowerment (Hickey and Mohan, 2005; Bell, 2004). The development agents ignore redistribution of resources especially power, which serves as means for empowering stakeholders. Bell (2004) contends that participation speciously practised blocks social change by undermining empowerment.

The transformative approach is therefore associated with elements such as good governance, transparency, legitimacy, inclusiveness and intensive participation. It is an empowering process. Local people become self-reliant and make crucial choices. It also entails decision-making autonomy. The instrumental approach on the other hand is associated with elements such as efficient use of resources and poor empowerment. It entails the use of resources of people to achieve project objectives.

### 2.5.6 Participatory Methods

Several methods have been identified as the means for implementing stakeholder participation. Eight are discussed in this section. Table 2.5 sums the objectives, strengths and weaknesses of the participatory methods. The choice of participatory method is guided by the purpose of participation and this includes increasing knowledge of participants, building consensus, improving agency decisions, generating acceptance of agency actions, increasing trust, and empowering stakeholders (Kessler, 2004). The choice also depends on the participatory approach followed and the intensity of participation envisaged (Reed, 2008) (see subsections 2.5.7 and 2.5.8 and Figure 2.3).

The first is focus group discussion (FGD) which involves face-to-face discussion among a small group of people (as many as twelve) with the help of a facilitator. The facilitator may lead group members to discuss the issue at stake outlining their perceptions and beliefs. Responses are open and participants are free to talk with other group members (Henderson, 2009). Participants' selection is controlled; it is usually based on predefined representative criteria (Videira et al., 2006; Rowe and Frewer, 2005; Mostert, 2003). Three main objectives of FGDs have been identified in the literature (see Table 2.5). Van Asselt Marjolein and Rijkens-Klomp (2002) as well as Hirsch et al. (2010) believe that FGDs are used to obtain information about preferences, opinions and outline diversity of views among community members. For Jonsson (2005) FGDs enable the identification of development problems and facilitate learning between different stakeholder groups on the one hand and between experts and other stakeholders on the other.

The FGD, according to Hare et al. (2003) and Hampton (1999), provides a flexible means of assessing public opinion and preferences, allowing inputs to enhance the quality of decision-making. As a rapid means for gathering data with a small number of people, FGD is cost effective and serve a useful function when the stress is on data quality and less on quantity of data (Rowe and Frewer, 2005; Mostert, 2003). FGD's strength as a deliberative tool that promotes open and constructive dialogues between interested parties enhances transparency. It is in addition useful for generating data on complex issues that require discussion to develop understanding since it makes it possible for groups to reach consensus over thorny issues (Videira et al., 2006). FGDs lead to intensive stakeholder participation (see 2.5.7) as it provides them an avenue to influence decision-making. Because FGDs cover few people, the views generated can be skewed and not wholly representative of large communities, the absence of structure demands specialised facilitation skills to ensure that the process does not lose focus.

A second method is citizen jury, which attempts to involve the wider community in the decision-making process. Citizen juries use a representative sample of the community who discuss possible approaches to a particular development condition. Participants receive detailed briefing on the background, current thinking and different perspectives relating to the topic in question. Participants interact with the experts who are available for questioning (Rowe and Frewer, 2005; Mostert, 2003). Participants also have the benefit to listen to testimonies and question other stakeholders before making recommendations (Kessler, 2004). Citizen juries are deliberative in nature and promote open and constructive dialogues between interested parties (Videira et al., 2006; Konisky and Beierle, 2001). Selection of participants is controlled just as in FGD, based on predefined criteria however citizen juries promote democratic decision-making process

since they engage a representative cross section of the community (Videira et al., 2006; Rowe and Frewer, 2005; Mostert, 2003). Citizen juries are used in situations where there is need to reach a consensus, obtain recommendations and most especially have a democratic decision-making process (Van Asselt Marjolein and Rijkens-Klomp, 2002) (see Table 2.5).

Just like FGD, citizen jury provides a transparent process for decision making and therefore more likely to generate non-aligned viewpoints. The interaction with experts provides citizens an opportunity to develop a deeper understanding of issues. It promotes good governance since stakeholder participation is intensive and stakeholders can influence the decisions arrived at. Citizen jury is important in transformative approaches because of its empowering strength. However, citizen jury has some weaknesses, despite efforts to draw a representative sample it only allows a limited number of persons into decision making, and outcomes of deliberations are highly likely to depend on social and psychological group factors (Rowe and Frewer, 2005; Mostert, 2003).

**Table 2.5 Features of Selected Participatory Methods**

Method	Objectives	Strengths	Weaknesses
Focus group discussion	Obtain information; problem identification; for learning between different stakeholder groups, between experts and other stakeholders	Rapid; cost effective; adaptable; reach group consensus; flexible means of assessing information from public	Information based on few people; less structured; requires effective facilitation so not to lose focus
Citizen juries	Reach consensus; obtain recommendations; have democratic decision-making process	Deliberative; promote open and constructive dialogues	Decision making by few people; outcome may depend on social and psychological group factors
Workshops	Share planning and decision-making responsibilities; development of skills of stakeholders	Improve decision-making process; empowers	Outcome may depend on social and psychological group factors
Interactive web page	Involve a broader segment of the population; announce meetings; for consultation; for open response on significant issue	Important when quantity rather than quality of data is needed; reaches the younger generation; efficient flow of information	Only people with knowledge in IT & are computer literate with access to internet can participate; it is expensive
Consultation document	Obtain views and opinions on significant issue	Improved decision-making	Requires literate participants
Public hearings, Open forum/public meeting	Obtain public testimony or comment	Inexpensive way of disseminating information to a large number of people	Can be dull or confrontational; insufficient deliberation; intimidate the uneducated & verbally unskilled; ownership not encouraged; may be dominated by unrepresentative groups
Demonstration	Show a viewpoint	Stakeholders may have a voice to impact on decision	Conflict may develop
Media, leaflets, brochures, pamphlets, posters	Inform, create awareness	Involve a broader segment of the population	Expensive

The third method workshops, involve controlled selection of participants, in face-to-face group discussions with a facilitator. Open responses are given. Experts, who are also available for questioning by participants, provide flexible information to address planning and decision-making responsibilities (Rowe and Frewer, 2005; Mostert, 2003). This enhances legitimacy. Like citizen jury, it is important in transformative approaches because of its empowering strength. The weakness associated with workshops is that like the citizen jury discussed above the outcome may depend on social and psychological group factors (Rowe and Frewer, 2005; Mostert, 2003).

The fourth involves an interactive web page of uncontrolled selection of participants. Authorities invite e-mail messages from the public on certain issues on their internet website. Responses are open (Rowe and Frewer, 2005; Mostert, 2003). The flow of information is two-way. This method attempts to obtain open responses on significant issues from a broader segment of the population. It is used to consult and announce meetings (Jonsson, 2005) and when less intensive stakeholder participation is envisaged as participants have less influence on decisions made (see 2.5.7, 2.5.8 and Figure 2.3). The interactive web page participatory method is important for seeking the views and opinions of the public in situations where the need for data quantity overrides that for data quality. It allows for efficient flows of information and most effective for reaching the younger generation. The major weaknesses are that only people who are computer literate, have knowledge in Information Technology (IT), and have access to the internet can participate. It is expensive as internet connections and computers are needed (see Table 2.5).

A consultation document, the fifth method involves the use of a document sent to a list of persons usually often representatives of interest groups and organisations with limited time for open commentary. Again as in the case of the first three methods participant selection is controlled. The objective is to obtain open responses (views and opinions) on significant issues (Rowe and Frewer, 2005; Mostert, 2003). Even though this method improves the quality of the decision-making process, its main weakness is that it requires literate participants.

The sixth is public hearings and public meetings, which are open, and involves no pre-selection of participants. The main objective of most public hearings is to obtain public testimony or comment on a particular development intervention. All interested parties have the opportunity to or register objections to a development application. Public meetings and briefings may be initiated by a local authority or convened in response to citizens' concerns. The information is not set but flexible and communicated by the authorities to participants face-to-face (Rowe and Frewer, 2005; Mostert, 2003). Public hearings and meetings are inexpensive ways of informing a large number of people about a proposal (Videira et al., 2006) and provides a forum in which views of stakeholders can be heard.

Their benefits notwithstanding, Videira et al. (2006) insist that public meetings and hearings can be dull and sometimes confrontational if the issue is controversial. They often involve insufficient deliberation (Konisky and Beierle, 2001) and sections of the public that have limited verbal skills and difficulties in articulating their concerns can be easily intimidated. Disadvantaged groups may be excluded as a result and accordingly middle-class participants favoured (Rowe and Frewer, 2005; Mostert, 2003; Hampton, 1999). Interest groups as well as those with more time, resources, status and motivation

can hijack public meeting and hearings (Holmes and Scoones, 2000). The emerging views and decisions will therefore remain unrepresentative of the wider community (Hampton, 1999). Public hearings and meetings do not encourage ownership of decisions by community members as professionals run them and community members are often passive participants (see Table 2.5). Stakeholder participation as a result is less intensive (see 2.5.7) in that they do not have full control over decisions arrived at.

The seventh method, demonstrations include marches, blockades and sit-ins organised by stakeholders themselves. They are expressions of activism, usually taking the form of a public gathering of people in a rally or a march. The objective is to register a protest or express a viewpoint regarding a subject of public interest, particularly in relation to a perceived grievance or social injustice (Biswas, 1990). The strength is that sometimes the demonstrators (stakeholders) are able to have a voice and impact on the decision. They may get placated sometimes. The authorities may use conciliation to win over the demonstrators. Demonstration may however generate conflict, particularly over contentious subject. Any group of people opposed to the goals of a demonstration may launch a counter-demonstration to present their views, often with violent outcomes.

Media and distribution of leaflets, brochures, pamphlets and posters is the eighth method considered here. These methods target a particular population with a set of information. Information flow is one way. The objectives for using these methods are to inform and invite the public into the processes and to create awareness (Jonsson, 2005; Rowe and Frewer, 2005; Mostert, 2003). The strength in these methods is that they have the potential to reach many people (including unconnected stakeholders such as households) with a standard message; however, they can be expensive. The level of stakeholder participation at which these methods of information-giving activities are employed can be low (tokenism and mis-participation) as stakeholders may not be able to impact on the issue (see subsections 2.5.7 and 2.5.8 and Figure 2.3).

When stakeholders are engaged in participatory methods, which are deliberative like FGDs, citizen juries and workshops and they see that their contributions to the process have helped shape a decision they view their involvement as meaningful and as making a difference. Such methods of involvement increase stakeholders' support of, commitment to, and knowledge about decisions/policies or regulations made, and hence compliance because they had a say in the process (Kessler, 2004). Engagement in such methods provides stakeholders opportunities to increase their sense of worth as well. These participatory methods are likely to have empowerment outcomes and can be employed in transformative approaches to participation (see 2.5.4 and 2.5.5). The challenge in choosing participatory methods is visualising the level or intensity of participation (see 2.5.7) that is appropriate in a given context or situation; and the approach - whether transformative or instrumental before making a choice.

### 2.5.7 Gradation of Stakeholder Participation

The importance of stakeholder participation is underscored in several arenas. Within the policy sciences literature writers like Edelenbos et al. (2010), Antunes et al. (2009), Rault and Jeffrey (2008), Gooch and Huitema (2008), Özerol and Newig (2008), Khanal

(2006), Mostert (2006), and Albrecht (2002) call attention to stakeholder participation as a key component of development discourse. Stakeholder participation is also gaining increasing attention in the management and policy world (De Stefano, 2010; Jonsson, 2005; the European Union Water Framework Directive – Mouratiadou and Moran, 2007; GWP, 2000; World Bank, 1996; Dublin Statement on Water and Sustainable Development 1992). The design of development projects also highlights the need for involvement of stakeholders (Africa – Chikozho, 2008; Gleitsmann et al., 2007; Nare, et al., 2005; Latin America - Garande and Dagg, 2005; Echavarria, 2002; Asia – AECOM International Development and the Perspective Group, 2010; Gamal, 2005; Prokopy, 2005; Transitional countries – Bekbolotov, 2007; Bojin, 2004; Khasankhanova, 2003).

The way the concept of stakeholder participation is being adopted shows that there are various gradations of it. Gradation produces a ranking of the various models of stakeholder participation based on a given criteria. Depending on the purpose of stakeholder participation that is envisaged, the type or model of participation can be chosen that is likely to lead to the fulfilment of the intended purpose.

This section discusses the gradations identified in the literature. Different authors base the gradation of stakeholder participation on different dimensions. Some of these are:

- a) Power - the extent to which citizens are empowered (Arnstein's (1969) ladder of participation). The outcome is three main levels with eight sub-levels (rungs of the ladder). These are: (i) non-participation – manipulation and therapy; (ii) tokenism – information, placation and consultation; and (iii) citizen power – partnership, delegated power and citizen control. Another gradation based on power has four levels (Barreteau et al., 2010; Probst and Hagmann, 2003; Biggs, 1989). The levels are: (i) contractual; (ii) consultative; (iii) collaborative; and (iv) collegiate.
- b) Direction of flow of information between participants and authorities (Rowe and Frewer, 2005). The outcome is three levels. These are: (i) communication; (ii) consultation; and (iii) participation
- c) Degree at which stakeholders are involved in participatory processes (Mostert, 2003). The outcome is six levels. These are: (i) information; (ii) consultation; (iii) discussion; (iv) co-designing; (v) co-decision-making; and (vi) decision-making. Others (Stefano, 2010; Mouratiadou and Moran, 2007) distinguish three levels: information supply; consultation; and active involvement.

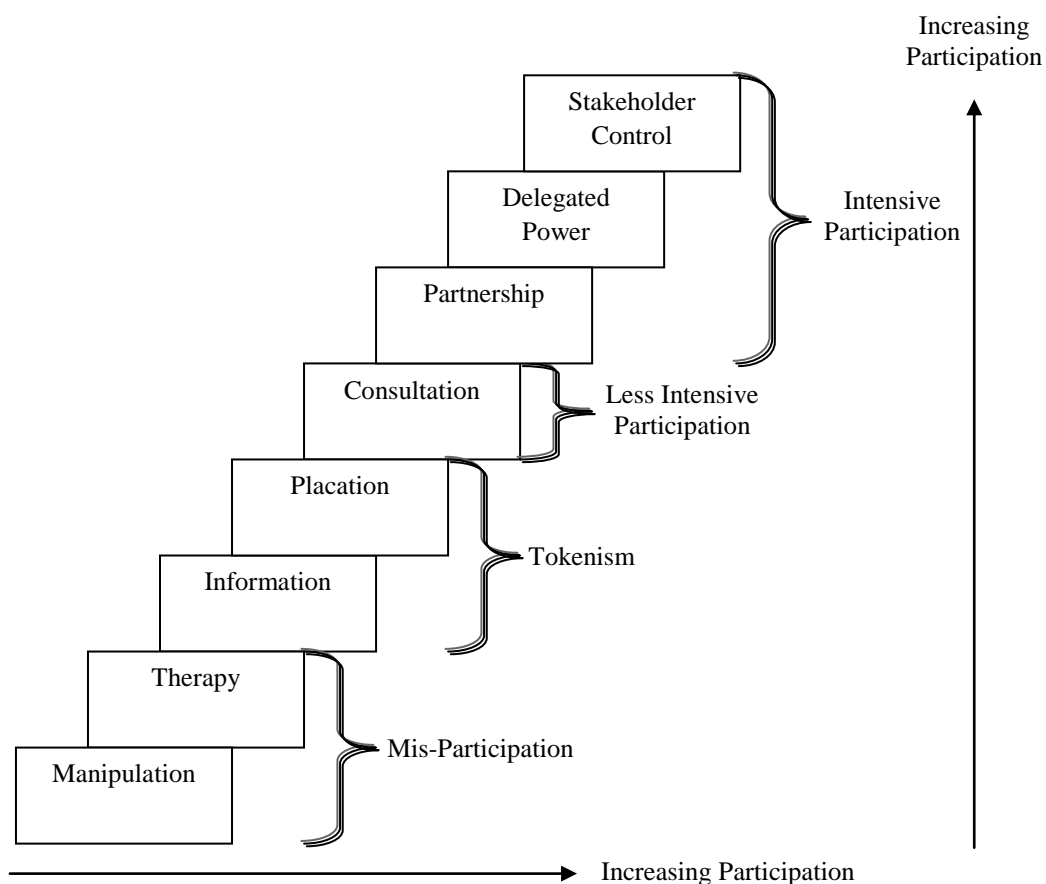
Other different gradations are discussed in the literature (see Schlossberg and Shuford, 2005; Bruns, 2003; Dorcey et al., 1994). However, the different gradations are all associated with intensity of stakeholder participation therefore they are discussed together. The following subsections describe the intensity (or degree/level) of stakeholder participation in policy/decision-making, planning and project implementation. Figure 2.2 illustrates the different intensities of stakeholder participation. The intensities are in a continuum as there are no clear-cut boundaries between them.

*Non-participation* are situations when the public is not contacted at all in the decision-making process. Their wishes are not at all taken into account. In practice, for example decisions are made with no information sharing or public input due to budget constraints, limited organisational capacity on the part of stakeholders (Bruns, 2003). In this situation projects are identified and designed by donors in consultation with central government officials and budgets and timetables planned in a rigid way. The emphasis is on

achievement of physical outputs within a limited time frame with close supervision and upward accountability making it difficult for the primary stakeholders to play any significant role (Oakley, 1991).

### *Mis-participation*

The low levels of participation are known as ‘mis-participation’. At these levels participation is mis-applied and participants are manipulated or given therapy. During manipulation the public is advised and persuaded to adopt specific decision. In therapy however, they are educated and made to internalise the status quo. Participation of the public is used to confirm or justify existing decisions and research (van de Kerkhof, 2004; Oakley, 1991; Arnstein, 1969). The emphasis is on achieving project goals.



**Figure 2.2 Gradation of Intensity of Stakeholder Participation**

Source: Based on Arnstein (1969); Mostert (2003); Rowe and Frewer (2005).

### *Tokenism*

The next major level of participation is referred to as tokenism (Arnstein, 1969). Others call it 'information' (Mostert, 2003). The public may hear and be heard but they cannot be certain that policymakers will heed to their views in the decision-making process. The 'information' level, also referred to as communication (Rowe and Frewer, 2005) involves a one-way flow of information, top-down, from decision-makers to the public. The public is informed of research results, policy plans and solutions to problems. Here stakeholder participation is defined as receipt of information (see Table 2.3). No mechanism is provided for feedback and no power exists for negotiation. The public has no control over decisions taken. In development projects, officials regard the primary stakeholders as lazy, ignorant, not resourceful and irresponsible. The primary stakeholders in turn perceive the officials as conceited, unsympathetic, unconcerned and corrupt. There is mutual distrust. In policymaking, primary stakeholders receive information after plans have been made through formal meetings where officials justify their plans, offering no occasion to consider modification (Wilcox, 1994; Oakley, 1991). Tokenism is also associated with the definition of participation where the public or stakeholders provide tangible inputs such as labour into the implementation process (see Table 2.3).

When the public is 'placated', they have some degree of influence. The authorities listen to the public concerns and appease them. There is no follow-up therefore, stakeholders lack the assurance that their concerns and ideas will be taken into account. The authorities reserve the exclusive right to accept or reject public advice. The extent to which stakeholders are actually placated depends largely on two factors: the quality of technical assistance they have in articulating their priorities; and the extent to which the stakeholders have been organised to press for those priorities (Rowe and Frewer, 2005; van de Kerkhof, 2004; Arnstein, 1969).

### *Less intensive participation*

At the 'consultation' level, views and opinions of the public are sought in the decision-making process. There is two-way information flow between authorities and the public. The public's input may influence perspectives but there is no guarantee that their views and opinions are considered in the decision-making process. The authorities initiate the process. In development projects, participation is limited to need identification and implementation of few rural projects. Most often consultation occurs in planning of activities under World Bank projects (Buchy and Hoverman, 2000; Wilcox, 1994).

### *Intensive participation*

The highest levels of participation entail the active involvement of stakeholders in decision-making processes. These levels are referred to in literature as 'partnership', 'delegated power' and 'stakeholder control'. All three allow a redistribution of power through negotiation between stakeholders and authorities, but in favour of stakeholders at the 'delegated power' and 'stakeholder control' levels. In 'partnership', stakeholders are able to bargain and arrive at a compromise with authorities; there is equal sharing of power in management of activities amongst stakeholders. In 'delegated power', stakeholders are involved in decision-making, have full managerial power and perform tasks independently. In 'stakeholder control', the stakeholders are in full charge of policy



as well as the managerial aspects (Rowe and Frewer, 2004; Arnstein, 1969). Intensive participation is associated with the definition of participation where stakeholders provide input into the decision-making process or have power in their hands (see Table 2.3).

Participatory methods used at these high levels are characterised by two-way information exchange (Rowe and Frewer, 2005; Kessler, 2004). Some degree of dialogue may occur in the process involving representatives of both parties. The differences in proportion of representation may arise, often determined by method used). The act of dialogue and negotiation serves to transform opinions in the members of both parties. Stakeholders and authorities agree to share planning and decision-making responsibilities. They may develop joint strategies, and form joint structures like joint policy boards, and planning committees. Other joint structures may include impasse resolution mechanisms. See Figure 2.3 for more examples of participatory methods that are employed at these high levels. To resolve differences stakeholders start the bargaining process and authorities respond to pressure at the 'partnership' level but in 'delegated power' authorities start the bargaining process rather than respond to pressure (Rowe and Frewer, 2004; van de Kerkhof, 2004; Arnstein, 1969). Collective action is an example of stakeholder participation at the level of 'stakeholder control' where initiatives are originated and fully controlled by the stakeholders (see Section 2.6 for explanation on collective action).

At the level of intensive stakeholder participation, there is active involvement of stakeholders in decision-making processes, they play decision-making roles. Stakeholders are less empowered and may be able to influence decisions at the less intensive level. Token participation refers to when stakeholders receive information and are poorly empowered. Stakeholders are manipulated and poorly empowered when participation is at the mis-participation level.

These levels of participation can also be seen as different models of participation. Depending on the intentions or objectives of the decision makers stakeholders may be involved at any of the levels of participation in the decision making process. According to Fung (2006) and Jackson (2001), the choice of level or appropriate level of participation depends on the objectives of involvement and the type of stakeholders with regard to their level of knowledge about the issue, and degree of commitment. For instance, policymakers may be more concerned with increasing public confidence in the policy process than truly seeking the views of the public. In such a situation, stakeholders may participate by being passive recipients of information from the governing bodies. Consultation processes may use methods such as community meetings to divulge knowledge about a decision rather than to seek views or to allow influence (Buchy and Hoverman, 2000). Béné and Neiland (2006) note that the organisational systems of implementing agencies for instance, account for the low levels of participation in the form of informing and consulting users to improve project design and management. If the intention is to have genuine participation by stakeholders then methods that allow stakeholders to have full control are employed.

#### 2.5.8 Relationship Between Elements of Stakeholder Participation

This subsection relates together the elements of stakeholder participation treated in Sections 2.4 and 2.5 (see Figure 2.3, which integrates all the elements on a complex

ladder of stakeholder participation). Intensive participation enhances democracy, good governance or ecological sustainability. Less intensive participation has goals of ecological sustainability. Tokenism and mis-participation are usually applied to achieve project goals.

Stakeholder Participation: A Spectrum of Involvement											
Gradation (Intensity of stakeholder participation)			Elements of Stakeholder Participation								
			Goals	Principles	Approaches	Methods (examples)	Outcomes				
Mis-participation		Tokenism		Less intensive participation		Intensive participation					
		Therapy	Information	Placation	Consultation	Partnership	Delegated power	Stakeholder control			
		Manipulation									
Project goals			No downward accountability, transparency, inclusiveness, legitimacy, social learning, conflict reduction, equity		Efficiency	Ecological sustainability	Good governance Democracy Ecological sustainability	Accountability, transparency, inclusiveness, legitimacy, social learning, conflict reduction, effectiveness, equity	Transformative	Citizen juries Focus group discussions Training & planning workshops (Two-way information flow)	Empowerment
Instrumental			Instrumental		Instrumental-transformative mix						
Print media Radio & television Pamphlets & posters (One-way information flow)			Conciliation (Two-way information flow)		Interactive web page Public hearings & meetings Consultation document (Two-way information flow)						
Poor empowerment					Less empowerment						

**Figure 2.3 Integrated Elements of Stakeholder Participation (Complex Ladder of Stakeholder Participation)**

The intensity of stakeholders' involvement in the decision-making process is high when the principles of stakeholder participation are applied (see subsection 2.5.3) with the exception of efficiency. Stakeholder participation is at the level of intensive participation, which are 'stakeholder control', 'delegated power' and 'partnership'. Participatory methods employed at these high levels of participation have two-way information flow. The approach to stakeholder participation at these high levels of participation is transformative.

At less intensive participation, stakeholders may influence decisions that are taken that is when their views are considered by authorities. The participatory approach is a mixture of transformative and instrumental approaches. Stakeholders are less empowered at this level. When they are less empowered they do not have power to enable them have full control over decisions or affairs. Stakeholders do not always influence policy/decisions, and their inputs may or may not influence decisions. Participatory methods employed have also two-way information flow (see Figure 2.3 adjacent to less empowerment for examples of these methods).

With the transformative approach to participation, the stakeholders are empowered and therefore have much power to influence the decisions made. This approach employs participatory methods that are likely to empower the stakeholders. Examples of the methods are listed in Figure 2.3 adjacent to 'transformative'. With the instrumental approach, the stakeholders have little or no power in shaping the decisions made as their participation is only used as a tool to achieve predetermined objectives. The level of involvement is therefore low. It is at the level of tokenism where they are 'placated' or 'informed' or at the level of mis-participation where they are given 'therapy' or 'manipulated'. The instrumental approach employs methods that involve one-way top-down flow of information and does not empower stakeholders. These methods give information to the stakeholders and depending on the content and 'language' of the message; it can be manipulative, therapeutic or just informative to the stakeholders. Examples of such methods are listed adjacent to the instrumental approach in Figure 2.3.

Participatory methods that less empower stakeholders are employed when participatory approaches are a mixture of transformative and instrumental approaches. Examples of these methods are also listed in Figure 2.3 at the side of 'transformative-instrumental mix'. Some participatory methods are employed at more than one level of participation. For instance, it is possible to hold focus group discussion for 'intensive' as well as 'less intensive' participation. Depending on the motive of applying stakeholder participation, the use of some of the information-giving methods can empower stakeholders. For instance, the motive may be for the public to acquire knowledge through information. This could empower them.

In this research, the intensity of stakeholder participation is assessed based on Figure 2.3. For instance intensive participation is participation having empowerment outcomes; enhancing democracy, good governance or sustainable development; or an approach to stakeholder participation that is transformative.

## **2.6 Other Theories Explaining Stakeholder Participation**

Stakeholder participation is influenced by other theories. These include the rational choice theory, mutual incentive theory, theory of group action, and the social identity theory. The rational choice theory proposes that people calculate the likely costs and benefits of any action before deciding what to do. It is known as the exchange theory in social interactions (Scott, 2000). Individuals are motivated by their wants and goals and act within specific, given constraints and based on the information that they have about the conditions under which they are acting. As the wants are many, the individuals make choices in relation to both their goals and means for obtaining these goals. The individuals anticipate the outcomes of alternative courses of action and calculate that which will be best for them. Rational individuals are said to choose the alternative that is likely to give them the greatest satisfaction (Scott, 2000).

The mutual incentive theory developed by Simmons and Birchall (2005) is also based on the rational choice theory and implemented within the structure of incentives for the participants. People participate because of anticipated and calculated benefits referred to as satisfaction or incentives (which are in the form of socio-psychological and economic rewards) that an individual expects from the exchange; and the socio-psychological and economic losses which are also referred to as costs, risks, punishments and investments (Tijunaitiene and Balciunas, 2010). Examples of the socio-psychological rewards are personal prestige, self-esteem and social status (Olson, 1971).

The thesis is also informed by the theory of group action, which is inspired by common interest. Water is traditionally taken as a common good and of common interest. The assumption is that stakeholders have interests, and they are likely to mobilise to protect or enhance those interests if there is a sense of urgency attached to their interests (Rowley and Moldoveanu, 2003). Participation points to the positive recognition of the common good by the person and as one strives to fulfil this, there is the realisation that that individual cannot do it alone but must seek it together with others. The common good is something recognised by persons as a real good and thus the individual works together with others in pursuit of this good. A community of persons participating in the pursuit of the common good is argued to contribute to the growth and development of the persons involved. This allows the inherent potential in a person to be enhanced. The participatory process thus opens up a person's capability to participate in the community of others. It sustains and enriches the interpersonal relationship between persons (Mejos, 2007). The group action theory is also explained by the social identity theory.

Social identity theory is about the relationship between group solidarity and group action. Through group membership individuals develop collective identity by associating themselves with the group's social identity, which "consists of a set of mutual understanding regarding the unique characteristics that distinguish *the group* from non-members" (Rowley and Moldoveanu, 2003: 208). The individual derives value and emotional significance from membership in the group. The collective identity creates individual commitment and a feeling of solidarity and belongingness. The individual reinforces his/her identity with the group by participating in the group's activities leading to collective action (Rowley and Moldoveanu, 2003; Fireman and Gamson, 1979). The theories discussed in this section underpin the collective action (theory?).

Meinzen-Dick and Gregorio (2004: 1) define collective action “as voluntary action taken by a group to achieve common interests. ... In the context of natural resource management, even deciding on and observing rules for use or non-use of a resource can be considered collective action”. Collective action operates at a high level of stakeholder participation i.e. ‘stakeholder control’ (see subsection 2.5.7) where stakeholders act independently to help themselves. Individuals in the group weigh the transaction costs against the benefits of the collective action and make a rational decision as to participate or not. The transaction costs, which are incurred by the active participants, are the cost of resources needed for the collective action. The costs include resources to carry out the collective action tasks such as money, time, labour and effort associated with monitoring and enforcing agreements. The costs are also resources that motivate participation and facilitate coordination such as leadership, consensus, moral engagement, effort associated with searching for collective partners and bargaining with those partners (Heikkila and Gerlak, 2005; Rowley and Moldoveanu, 2003; Taylor and Singleton, 1993). The benefit is described as “size of the aggregate expected gains” (Libecap, 1994: 567). People act based on their individual expected utility from the action. Utility is the usefulness or gain from an action from the perspective of that individual.

Most scholars agree that certain characteristics of the good or resource (physical environment) and certain characteristics of resource users can reduce the transaction costs associated with collective action, and thus increase the likelihood of successful collective action (Araral, 2009; Heikkila and Gerlak, 2005; Lubell et al., 2002; Libecap, 1994; Taylor and Singleton, 1993; Ostrom, 1990). Such characteristics of the resource include the scarcity of the resource and the size of the resource. The characteristics of resource users include group size, trust and reciprocity, origin of the user group and resource users’ dependency on the resource.

It is in the view of scholars that collective action among actors or resource users depends on the severity of the problem (Ostrom et al., 1994a; Ostrom, 1990). Some argue that collective action is likely when the resource is moderately scarce because there is likely to be cooperation when the resource is neither extremely scarce nor extremely abundant (Araral, 2009; Agrawal, 2002; Bardhan, 1993; Uphoff et al., 1990). Put in another way, Ostrom (1990, 2001, and 2004) and Heikkila and Gerlak (2005) argue that collective action is possible where the severity of the problem is relatively high and yet where improvements are still feasible; or resources are scarce but not entirely destroyed. Implying, when the resource is extremely scarce or the problem is extremely severe and there is no feasible improvement or solution actors will not cooperate. Knowledge of the severity of the problem or scarcity of the resource depends on the ability of the resource users to assess information (Ostrom, 2004; Blomquist, 1992). Local availability of reliable and valid indicators of the condition of the resource system at reasonable costs helps (Ostrom, 2004). Inability to recognise the severity of the problem might bring about non- cooperation amongst actors (McCay, 2002).

Size of the resource is considered as a factor that affects the likelihood of a collective action. It is argued that common pool resources that are smaller and have more clearly defined boundaries are more likely to be associated with successful collective action (Ostrom, 1990, 2001; Heikkila and Gerlak, 2005). The argument is that it is easier to acquire accurate information about the conditions of a smaller or more predictable

resource (Ostrom, 1990); and it is likely to have lower costs of monitoring and enforcement (Araral, 2009; Wade, 1988).

Group theory and normal thinking suggest that collective action is difficult as group size increases. This is supported by Araral (2009), Fujiie et al. (2005), Tang (1992), Ostrom (1990), and Olson (1971). However, there is no consensus on what size a small group is and what size a large group is. Olson (1971: 2) is of the view that “unless the number of individuals in a group is quite small, or unless there is coercion or some other special device to make individuals act in their common interest, rational self-interested individuals will not act to achieve their common or group interests”. To him it is how visible each person’s (in the group) actions are. Trust and reciprocity are considered as essential characteristics of resource users in supporting collective action (Ostrom, 2004; 1998). Related to this is the age of the user group, which is also perceived to affect collective action (Araral, 2009; Fujiie et al., 2005). For older groups, because users have experience working together directly, it is believed that they can develop trust in the reliability of each other and be assured of the reciprocity of each other (Meinzen-Dick et al., 1997; Taylor and Singleton, 1993; Ostrom, 1990). With newer groups, members are less certain about whether cooperation with others will be reciprocated (Meinzen-Dick et al., 1997).

The user group’s origin it is argued, may affect the possibility of farmers developing collective action. Ostrom and Shivakoti (2002) explain that the sense of ownership is likely to be stronger among self-organised irrigation associations than those organised by government agencies. Thus, farmer cooperation is more likely in self-organised associations. The extent to which resource users depend on the resource for their livelihoods is viewed to be important for collective action in a common pool resource (Dietz et al., 2003; Ostrom et al., 1994a; Ostrom, 1990; Wade, 1988). The factors influencing collective action give ideas about factors that can motivate stakeholders to take part in participatory processes.

## **2.7 Summary and Inferences**

The literature on stakeholder participation shows that first; stakeholder participation has a role in development policymaking and implementation. Participation received attention when non-participatory forms of development policymaking were perceived as ineffective. Since then there has been increasing emphasis by scholars and policymakers on stakeholder participation in development over the decades. Consequently, participation has shifted from adoption of technology through provision of labour, cash and essential services by the public to involving the public in decision-making in the development discourse.

Second, the interpretations of participation differ depending on which aspect the emphasis is. Thus, contribution of inputs into decision-making processes; influencing decision-making and implementation processes; contribution of tangible inputs into implementation processes; and sharing in the benefit or cost of outcomes. The objectives of practitioners and purpose of stakeholder participation visualised are likely to influence the interpretation. These interpretations informed the research.

Third, the concept of stakeholder participation is related to concepts of decentralisation, democracy and good governance. The four concepts re-enforce each other in development

planning and practice. Limitation or improvement in one is likely to affect the others. The principles of stakeholder participation are reflected in the three related concepts of decentralisation, democracy and good governance as well as sustainable development (referred to as environmental sustainability in this study). The goals and principles of participation and the transformative approach are associated with intensive stakeholder participation. The elements including the goals and principles of participation, and participatory approaches and methods therefore serve as indicators for evaluating levels of participation and empowerment of stakeholders in the Ghana and other cases in the subsequent chapters. This is done in relation to the complex ladder of participation. The review on collective action serves as a basis for interpreting participatory actions in the Ghana water sector.

Fourth, despite the criticism against the instrumental approach, it is of importance because it creates the space for implementation processes to be carried out whilst transformative approach empowers stakeholders.

Fifth, the importance of stakeholder participation is in its strength of improving the quality of decision and policymaking; increasing acceptance of decisions made and bringing about easy implementation and empowerment of the marginalised among others. These strengths are generally accepted.

Sixth, the potential benefits of stakeholder participation, which are the strengths of stakeholder participation, do not come by automatically. Some scholars have pointed out weaknesses in participatory processes such as how to include all relevant stakeholders. Participation is also alleged to be a process of developing conflict and encouraging power struggles. It is argued to be resource intensive, soul searching, and needs political and social change; therefore, certain factors influence the realisation of those benefits. There is the need to understand how these factors operate in developing countries. The factors influencing effective stakeholder participation are examined in the next chapter.

## 3 Stakeholder Participation in Practice: Examining Experiences from Developing Countries

### 3.1 Introduction

Earlier discussions in Chapter 2 explored the linkages between the elements of stakeholder participation and identified the potential benefits of stakeholder participation. This chapter focuses on how developing countries interpret and apply the elements and concept of stakeholder participation in their development efforts. The chapter also explores the extent to which developing countries achieve the potential benefits of stakeholder participation in the water sector. It gives special attention to stakeholder participation in water and environmental management in developing countries in an attempt to answer the following questions: How do developing countries interpret and apply the elements and concepts of stakeholder participation? What are the substantive and procedural elements of stakeholder participation? To what extent are stakeholders involved in the participatory processes?

In the subsequent sections, I first present the overview of the literature/cases (Section 3.2) followed by how the concept of stakeholder participation is interpreted and applied (Section 3.3). The extent of stakeholders' involvement follows in Section 3.4. The next section (3.5) analyses the benefits and problems of stakeholder participation as revealed in the case studies. A discussion of the factors that affect stakeholder participation is presented in Section 3.6. The chapter ends with inferences derived from these practices (Section 3.7).

### 3.2 Overview of Literature/Cases

The literature review concentrated on 14 cases of stakeholder participation in water and environmental management. This section looks at cases that are addressing different water and environmental issues – water supply, catchment management and natural resource conservation and protection. This approach is envisaged to allow a more comprehensive overview that is representative of the existing water resource management problems in developing countries. The cases are drawn from the three developing country continents: Africa, Asia and Latin America. The countries are Botswana, Mali, Tanzania and Zimbabwe in Africa; India, Pakistan and Thailand in Asia; and Chile, Colombia and Mexico in Latin America.

Table 3.1 gives the background of the cases. The cases are from countries where there are decentralised systems of governance or water/natural resource management. The selection of the cases was also influenced by the IWRM principle of subsidiarity where participation in decision-making in water resource management is applied at the lowest appropriate level (Fatch et al., 2010). These cases, therefore, focus on local communities and on management of local projects. The rest of the section briefly explains the case studies under the different environmental issues concentrating on their dominant decision-making and implementation processes.



**Table 3.1 Background of Cases from Developing Countries**

Case, country	Governance level	Environmental issue	Key stakeholders
Koro District rural water supply, Mali	Community	Water supply	NGO, local government, pump committees, communities
Yélékébougou rural water supply, Mali	Community	Water supply	NGO, WMCs, communities
HESAWA programme, Tanzania	Community	Water supply	Donors and government, WUGs, communities
The Karnataka & Uttar Pradesh rural water supply projects, India	Community	Water supply	World Bank, government, VWSCs, communities
Pakistan rural water supply, Pakistan	Community	Water supply	International donors, government agency, VDAs, communities
The Molinos water project, Chile	Community	Water supply	Canadian NGO, government, upstream & downstream communities
Save Catchment & Odzi Sub-Catchment Councils, Zimbabwe	Basin	River basin council	Local governments, private industries and farmers and resettlement and communal farmers ((sub) catchment council)
Lerma-Chapala Basin Council, Mexico	Basin	River basin council	CNA, federal, state and municipal governments representatives, organised water users committees representatives (basin council)
Upper Ping River Basin Irrigation, Thailand	Basin & community	River basin council, irrigation	Local government, traditional irrigation committees (RBCs), irrigation households
Kihansi River Catchment area, Tanzania	Basin & community	Catchment management	Communities
Mwanza Region, Tanzania			
Protection of watershed in the Cauca Valley, Colombia	Basin	Catchment management	CVC, WUAs, private sector, communities
Haryana forest management, India	Community	Natural resource conservation	Government agency, village councils communities
Bihar forest management, India			NGO, village councils, communities
Development of environmental sustainability indicators in Kalahari, Botswana	Community	Natural resource conservation	Researchers, agricultural extension workers, pastoral communities
Community development and natural resource management project, Botswana	Community	Natural resource conservation	Government agency, communities

Source: Jones (2011); Kathyola and Oluwatoyin (2011); Reed et al. (2008); Gleitsmann et al. (2007); Rautanen et al. (2006); Garande and Dagg (2005); Prokopy (2005); Memon (2004); Resurreccion, et al. (2004); Dungumaro and Madulu (2003); Wester et al. (2003); Echavarria (2002); Kujinga (2002); Work (2002); Lise (2000); Twyman (2000); Hitchcock (2000).

### 3.2.1 Water Supply Experiences

#### *Koro District rural water supply project in Central Mali*

The West Africa Water Initiative (WAWI) initiated and supported the Koro District rural water supply project in Mali. World Vision International (WVI)-Mali coordinated and implemented the project. The main activities were provision of sustainable access to potable water by drilling boreholes, fixing them with hand pumps, and establishing community-based maintenance and hygiene groups. The WVI-Mali selected the design of the pumps to conform to a design criterion set by the World Health Organisation (WHO) to meet standards of water quality. The selection of the pump was also based on their (WVI's) previous rural water supply development experience in other parts of West Africa.

During the design phases of the water supply development projects the WVI did not consult the communities that were involved. The design phase therefore lost the benefits of experience gained by the villages that had previously operated different systems. The selection of the beneficiary communities was undertaken by the WVI-Mali in consultation with the district mayor's office. The communities had to indicate their acceptance of the project by contributing 100,000 CFA (approximately US\$ 175). After installation of the hand pumps, WVI-Mali maintained a stock of spare parts at their local headquarters and monitored the progress of the hygiene and maintenance groups for each community (Gleitsmann et al., 2007).

Households were required to pay an access fee to the pump committee in order to utilise the pump-fitted boreholes. The access fee consisted of an initial contribution as well as shared maintenance costs as they arose. The fee was variable and could come at any time. Communities used the boreholes fitted with hand pumps less. They relied more on community large-diameter wells, which were in existence before the installation of the boreholes. Reasons given for not using the boreholes were design-related; the unreliability of the pumps; the difficulty in manually operating the hand pumps; the low water flow; and too high access fees. In contrast, the community large-diameter wells could provide large quantities of water at a time. The communities were concerned with having adequate quantities of water that they could readily access through large-diameter wells with relatively lower maintenance demands (Gleitsmann et al., 2007).

#### *Yélékébougou rural water supply project in Western Mali*

WaterAid in Mali created, trained and supported village-level Water Management Committees (WMCs) for the management of water and sanitation facilities and for the mobilisation of communities to participate in decision-making and management of the water supply system. The key stakeholders were WaterAid (secondary), the WMCs and beneficiaries (primary). The training of the WMCs covered hygiene promotion, mobilisation of financial resources for the maintenance of the water infrastructure, and promotion of the participation of the wider community. Committees were to act as a space for decision making on water issues at village level, as well as collecting payments from users to cover operation and maintenance (O&M) costs. However, the committees focused on only hygiene education. The committees were unable to mobilise the communities to participate in decision-making. They were also unable to collect payment from users. Consequently, individuals, instead of the committees in the communities, managed the hand pumps. The reasons for individuals assuming responsibility included: a) living near the hand pump; b) being identified as trustworthy by the village chief; c) or being members of a committee, which already existed for another purpose, such as managing the school, clinic or market (Jones, 2011).

The mechanism for pricing and collection of water varied from village to village but none of the payment systems was sufficient to sustain the O&M costs of the hand pumps. Exceptions were the villages that did not have alternative sources of water and depended solely on water from hand pumps. The underlying rock of the villages without alternative source of water was such that it was difficult to dig traditional wells to a depth sufficient to obtain water. Therefore, the dependency on the boreholes served as an incentive to ensure repairs as soon as the hand pumps broke down. The villages that depended on water from hand pumps also had more active and effective WMCs (Jones, 2011).

*Health through Sanitation and Water (HESAWA) programme in Kagera, Mwanza and Mara Regions in Tanzania*

The Health through Sanitation and Water (HESAWA) programme in Kagera, Mwanza and Mara Regions in Tanzania had, as one of its goals, to apply technical and administrative solutions that facilitate local participation and minimise costs for O&M. The programme emphasised community management and ownership of water supply schemes. Water user groups (WUGs) were formed which empowered the local community to operate, maintain and safeguard water facilities. The WUGs were democratically selected by a meeting of all neighbourhood residents (Rautanen et al., 2006).

WUG members were trained in hygiene education and skills on pump repair. They were provided with necessary tools. In addition, the village leadership was given training on participatory monitoring, management skills, vision and leadership. The WUGs were responsible for cost recovery. They collect payment for water to cover the O&M cost. The money collected was to ensure sustainability of facilities (Rautanen et al., 2006).

Ownership of water facilities was demonstrated by the rate of participation in responding to key decisions concerning maintenance of water facilities. About two thirds of the households made contributions in cash and one third in-kind for the maintenance of water facilities. About 90 percent of the households contributed towards the construction of their water point. Donors provided over 75 percent of the investment cost of the HESAWA programme whilst the Government of Tanzania and the beneficiaries contributed below 25 percent including in-kind contributions (Rautanen et al., 2006).

*The Karnataka and Uttar Pradesh rural water supply projects in India*

The World Bank and the Indian government initiated the rural water supply and environmental sanitation projects in the Karnataka and Uttar Pradesh States. They intended the projects to cover 1,200 villages in Karnataka and 1,000 villages in Uttar Pradesh. Local water agencies, Village Water and Sanitation Committees (VWSCs), subcommittees of the local governments, were created with responsibilities concerning finances (collecting capital cost contribution; setting and collecting tariff), and operation and maintenance of water facilities. Communities in Uttar Pradesh had a choice about technology type but communities in Karnataka did not. Communities in both states influenced the location of the facilities as well as the membership on the VWSC (Prokopy, 2005).

*Pakistan rural water supply projects*

The aim was to achieve sustainable rural water supply in Pakistan through institutionalisation of community participation. The project took the form of institutional change in the public agency, which was responsible for rural water supply, the Public Health Engineering Department (PHED). This agency was a traditional bureaucratic

department. Three new departments were created within the PHED. These were the community participation, the human resources and training, and management and information systems (MIS) departments. The MIS department kept records of activities including the construction of water schemes, the formation of Village Development Associations (VDAs) and training activities. This provided quick information on all aspects of the projects. The communities applied for the water facilities and agreed to conduct participatory processes with the help of the newly created community participation department of the PHED (Memon, 2004).

The VDAs were made up of representatives from all ethnic groups. The VDAs conducted regular meetings, collected user fees, and organised health and hygiene education. The communities through the VDAs procured land free of charge for installing water facilities, and provided in-kind labour and material contributions. The communities owned and operated the scheme (Memon, 2004).

#### *The Molinos water project in Chile*

A Canadian NGO based in Santiago and the government of Chile initiated the Molinos water project. The project was the first large-scale development project introduced into the village of Molinos. The aim was to have a self-sustainable water supply project with a low technology and low budget water treatment strategy. The community of Molinos was interested in learning about new ideas for their arsenic contaminated water problem (Garande and Dagg, 2005).

The project had an objective of involving the community in all stages of the project but in the initial stage, the Canadian NGO held consultations with only the government and informally with few individuals in the community about the project. Discrepancies arose over the ideal location of the project. The implementation of the project came to a halt. The reasons were that: the community's knowledge about the project was minimal and therefore they had no input in the project planning; minimum resources were allocated for participatory processes by the NGO; and reliance of the NGO on its supporters such as businesses, government agencies and individuals to make more resources available. The NGO felt that the community had difficulty in comprehending the processes involved in achieving groundwork for development work to start such as securing finances and resources; and time for dealing with internal politics that may arise (Garande and Dagg, 2005).

### 3.2.2 River Basin Management Experiences

#### *Save Catchment and Odzi Subcatchment Councils in Zimbabwe*

Zimbabwe moved from centralised to decentralised management of natural resources towards the end of the 1990s. The impetus to decentralise was driven by structural adjustment conditionalities informed by the global neo-liberal economic logic (Dube and Swatuk, 2002). The decentralisation adopted was devolution but without the provision of the necessary financial and material resources. The move to decentralisation was because centralisation of state power was having a weakening effect on good governance. The reform aimed at increased stakeholder participation in water management through catchment boards (Sithole, 2001). Before the decentralisation, stakeholder participation in

water resources management was limited to only stakeholders with water rights. During the reform, a working group identified stakeholder groups that were to be represented on the catchment and sub-catchment councils. The representatives of the stakeholder groups formed sub-catchment councils and they elected their chair- and vice-chair-persons. The chair and vice-chair-persons of each sub-catchment became automatic members of the catchment council (Kujinga, 2002).

#### *The Lerma-Chapala Basin Council in Mexico*

River basin councils in Mexico were the coordinating and consensus-building bodies in water management. The Lerma-Chapala Basin Council composed of the Comisión Nacional del Agua (CNA) (National Water Commission); representatives of federal, state and municipal governments; and representatives of organised water users committees. Water users without a license were not eligible to elect committee members and therefore had no voice in the Basin Council. Only organised stakeholders were represented and formed part of the Council. Some of these organised stakeholders were the watershed commissions and aquifer management councils. The rural poor and small irrigation units were not organised and therefore could not be represented on the Council (Wester et al., 2003).

The decision-making body of the Council was the governing board, which was a twelve-member board comprising of the governors of the five states in the basin; the CNA regional head; and six user representatives. The governing board was government dominated decision-making body. The CNA, the government agency granted water use rights to users, managed the dam and main canals whilst the WUAs managed secondary canal units (Wester et al., 2003).

#### *Upper Ping River Basin irrigation in Northern Thailand*

River Basin Committees (RBCs) were established to institutionalise participatory and decentralised approaches to water resource management. The RBCs operated at the local and regional levels. Their responsibilities included; prioritisation of water resource issues; the facilitation of communication between the local public on one side and the stakeholders and beneficiaries on the other side; and promotion of sustainable resource management and public education. Members of the committees were from the local government offices and traditional irrigation committees (ICs).

The gender division of labour in community farming activities was such that irrigation matters were considered men's concerns. The cultural norms and traditions define irrigation water as a male resource. As a result, the ICs were traditionally male organisations but the women were clearly farmers and water users.

The ICs planned the allocation of water; set dates for cleaning ditches; monitored the flow of water in each canal; collected fees and materials; and sanctioned defaulters who violated rules. Irrigation households paid fees, contributed material and labour for cleaning ditches and maintenance of dam (Resurreccion, et al., 2004).

The Asian Development Bank (ADB) planned building the capacities of the RBCs and empowering them through management and technical workshops and meetings. This would reinforce the power imbalance between the genders and in addition legitimise the gender inequality with respect to irrigation water (Resurreccion, et al., 2004).

### 3.2.3 Catchment Management Experiences

#### *Kihansi River Catchment area and Mwanza Region in Tanzania*

In the Kihansi River Catchment area, dry season cultivation at valley bottom plots extended close to the riverbanks, which led to increase in soil erosion and river sedimentation. Local communities identified problems in the catchment area of the river and subsequently enacted local bye-laws that limited valley bottom cultivation within twenty meters range from the river on both sides. In the Mwanza Region, the problem was to protect sources of drinking water. The communities enacted bye-laws that limited human activities close to sources of drinking water. In both cases, the communities were involved in the implementation processes and compliance with the decisions taken was very good (Dungumaro and Madulu, 2003).

#### *Protection of watershed in the Cauca Valley, Colombia.*

Colombia had a programme of watershed management and protection promoted by the government. A government organisation, the Cauca Valley Corporation (CVC) that was the decentralised province environmental authority prepared and developed management plans. However, the CVC lacked resources to invest in the implementation of management plans. CVC charged water user fees, which was paid by urban, industrial and agricultural users. The CVC used the fees for different CVC programmes but it was not enough to invest in the implementation of water protection activities. Downstream large-scale agricultural water user association (WUA), concerned about the supply of water for agricultural purposes collectively decided to take action and fund the implementation of sub watershed management plans. Besides the fees, members of the water user association paid for the water they use and they voluntarily paid an additional fee depending on their water concession. The second fee was used to fund activities to protect forests and vegetation cover in the highlands in order to increase flows and stabilise discharges during the rainy season. There was a transfer of resources from downstream users to upstream users (Echavarria, 2002).

The WUA's general assembly selected its board of directors, determined its statutes and the fee charged to its members. The board selected projects to finance based on the guidelines of the assembly and in line with the CVC's watershed management plan (Echavarria, 2002).

The CVC had technical expertise as well as a meteorological and hydrological monitoring network. Other private sector organisations were invited by CVC to collaborate in the implementation of the management plan by providing technical assistance to improve agricultural practices and marketing of crops to improve the livelihood of the upstream communities as well as protecting the watershed.

In this partnership CVC prepared management plans, it consulted the WUAs and communities for their inputs into the watershed management plans; the WUA contributed

money for implementation; and upstream communities shared benefits in terms of community organisation, technical assistance, production activities, training and education (Echavarria, 2002).

### 3.2.4 Natural Resource Conservation Experiences

#### *Haryana and Bihar forest management in India*

The two cases here are about voluntary people's participation in forest management. The Haryana joint participatory forest management project was initiated by the state with a negotiation between forest department employees and villagers on the establishment of a forest plantation. It resulted in the state building dams for the villages to check erosion from hilly areas of the forest and providing irrigation water for the villagers. The villagers in turn collected non-timber forest products from the forest and protected the new plantation. The villagers elected the village council that managed the forest (Lise, 2000).

The Bihar forest management project was initiated by an NGO by encouraging the villagers to pool resources to solve a problem of economic stagnation. The villagers pooled land and labour together. The land was put under a multi-tiered cropping pattern including trees. The output of the pool was shared into three among those who pooled the land, those who provided labour, and a village fund (used for development of the village). The villagers depended on the forest for an income supplement. In both cases, the participation was high amongst villagers who depended highly on the forest and/or perceived the quality of the forest to be good (Lise, 2000).

#### *Development of environmental sustainability indicator for semiarid rangelands in the Kalahari, Botswana*

The aim of the project was to develop indicators that specialists and nonspecialists alike could use to monitor progress towards sustainability and environmental management goals by integrating local knowledge and scientific knowledge. Environmental indicators identified by local pastoralists in interviews by researchers were compared and combined with indicators from the literature that had been developed in comparable semi-arid rangeland areas. Land degradation indicators, perceived to be accurate and easy to use by the pastoralists in focus group discussions with agricultural extension workers were tested empirically using ecological and soil-based sampling techniques (Reed et al., 2008). Pastoral communities ranked the indicators at focus group meetings. The meetings discussed early warning indicators as well. The early warning indicators were found to be valuable in linking environmental monitoring to the management decision-making process. Pastoralists were involved in the collection of ecological data and provided expert assistance with species identification, local plant names, and uses (Reed et al., 2008; Fraser et al., 2006).

The range of indicators obtained from pastoralists was far broader than indicator lists from the literature. They were based on vegetation, soil, livestock, wild animal, and socioeconomic indicators. In contrast, indicators from the literature were based only on vegetation and/or soil indicators (Reed et al., 2008; Fraser et al., 2006; Esler et al., 2005).

Researchers and policymakers initiated the process but local stakeholder input was allowed to drive the process. The process of identifying indicators built capacity within the communities and empowered them as well. Participants with a formal education were able to conceptualise and articulate indicators (Reed et al., 2008; Fraser et al., 2006).

#### *Community development and natural resource management project in Western Botswana*

The Botswana government has been making efforts (since the late 1980s) to decentralise natural resource management and use to the local level to promote biodiversity conservation. To promote community participation in wildlife management a number of Controlled Hunting Areas (CHAs) were designated for community controlled natural resource activities by the government. The project was to enhance rural livelihoods by giving communities greater control over natural resources and conserving biodiversity at the same time. The communities could obtain wildlife quotas, which they could use themselves or lease to a private (safari) company (Hitchcock, 2000).

There was initial consultation by the district-level Department of Wildlife and National Parks (DWNP) (programme implementers). The meetings emphasised empowerment and participation but had undertones of subordination and manipulation. The officials of the DWNP persuaded and encouraged communities to follow government recommendations to lease their land to the private companies for hunting. The communities would, in turn, obtain money to improve their livelihoods. However, one of the principal concerns of the communities was the issue of sustainability. They perceived that expanding hunting by the private companies would deplete the animals and hence sustainability of the project. The people were suspicious of government programmes because of experiences of natural resource dispossession and unsustainable wildlife projects (Twyman, 2000).

The district-level DWNP officials asserted power through so-called participatory projects, which gave natural resource rights to communities. The powerlessness of the communities made them reluctant to question or refute government help for fear of losing any benefit that may accrue. Though the DWNP officials were trained in participatory methods of extension they had to go by the project's objectives and designs for them (officials) to be effective and accountable to their employer (Twyman, 2000).

### **3.3 Interpretation and Application of Stakeholder Participation**

Different agencies or governments interpret or place different connotations on the concept of stakeholder participation. The different interpretations given to stakeholder participation are influenced by the goals that are to be achieved. The goals are identified by the underlying principles that the participatory processes embarked on.

The purpose of applying participation in developing countries more often than not is for delivering development projects (Williams, 2004) and for distributing power from the centre to the local. Here, stakeholder participation is interpreted to mean power to ensure greater participation in decision-making. Decentralisation of water management to lower (basin and community) levels in general has followed the global trend in over three



decades. Water reforms devolve water management to lower levels and increase stakeholder participation as well (Norman et al., 2012; Boelens et al., 2010; Castro, 2008). River basin organisations and local water agencies were formed to be in charge of water management activities in the reviewed cases. Such approaches are transformative because the stakeholders had the power to take decisions (see 2.5.5). These were carried out by having board/committee meetings or stakeholder meetings at the basin as well as the community level. Examples are user representation on the governing board in Lerma-Chapala Basin in Mexico (Wester et al., 2003) and catchment committees or councils in Zimbabwe (Dube and Swatuk, 2002; Kujinga, 2002); and management and technical meetings held by the Upper Ping RBC in Northern Thailand (Resurreccion et al., 2004).

Decentralisation has the potential to include local knowledge in decision-making and has transformative approach to empower stakeholders. In the light of this, the political context of gradual and on-going decentralisation and the responsibility for the provision of drinking water services in Mali was passed to the municipalities. However, the forms of participation which were originally intended to empower stakeholders and promote citizenship by improving decision-making turned out to be instrumental by promoting payment for water which was found to be more crucial and in the process excluded the poor from getting access to water (Jones, 2011).

Another way is to think of participation as building the capacity of stakeholders to enhance meaningful involvement. This inclination led to the holding of training and technical workshops to build the capacity of stakeholders. The Upper Ping RBC held capacity building in the form of technical workshops as well as planning and consultation workshops to exchange experiences (Resurreccion et al., 2004). Implementing agencies held training workshops for water committees at the community level in the Yélékébougou project in Western Mali (Jones, 2011), HESAWA programme in Tanzania (Rautanen et al., 2006), Karnataka and Uttar Pradesh project in India (Prokopy, 2005), and rural water supply projects in Pakistan (Memon, 2004). The committees acquired skills from the training in the following areas: mobilisation of communities to participate; organisation of meetings; simple accounting for earnings and expenditure; operations and simple maintenance of water supply facilities; and health and hygiene practices (Rautanen et al., 2006; Memon, 2004). Participatory methods employed in the form of workshops and focus group discussions empowered communities in the sustainability indicator selection by increasing their capacity to manage the environment in the Kalahari, Botswana (Reed et al., 2008; Fraser et al., 2006).

Others interpret the concept of stakeholder participation to involve increase in dialogue in development decision-making. This view led to the application of transformative approaches, which were transparent like the iterative community-science dialogue that combined scientific and local knowledge in developing environmental sustainable indicators in the South Kgalagadi, South West Kgalagadi and Mid-Boteti Districts in Botswana (Reed et al., 2008). The method involved multi-stakeholders - communal and commercial pastoralists, extension workers, researchers and policymakers. The input by the pastoral communities was very important in the indicators arrived at (Fraser et al., 2006).

CVC in the Cauca Valley, Colombia consulted upstream communities in the form of meetings for their inputs in the decision-making processes. The inputs of the communities formed part of the management plan for protecting the watershed (Echavarria, 2002). Communities themselves also convened meetings, for instance, village council meetings were held on forest management in Uttar Pradesh and village society meetings held fortnightly in Bihar Forest Management, both in India (Lise, 2000). Another example are irrigation committee and farm household meetings in the Upper Ping River Basin Irrigation Project in Northern Thailand but these meetings did not include women (Resurreccion et al., 2004).

Another conceptualisation given to stakeholder participation reflects in the operationalisation through instrumental approaches to achieve project objectives. This perspective at times involves risk and benefit sharing as resources of stakeholders are expended. This is demonstrated in stakeholders making cash and in-kind contributions towards the construction of water point in the HESAWA programme in Tanzania (Rautanen et al., 2006) for instance. Cash contributions were also made in funding protection of watersheds as in the case of the Cauca Valley in Colombia (Echavarria, 2002). In such instrumental approaches, communities are persuaded to follow predetermined objectives (see 2.5.5).

There are those who think of participation in the light of information sharing. The method adopted by officials of the DWNP to persuade and encourage communities to lease their land to private companies for hunting in Botswana was premised on this perception. However, the method to explain the programme before it began was one-way information flow. Information was given to the communities through speeches and posters. The language and images used at the meetings had strong connotations of subordination and manipulation (Twyman, 2000). Consultations were carried out through village-level public meetings and meetings with traditional and political leaders to explain the project before it began. However, the communities were afraid to voice their preferences due to power differences. The authorities were not concerned about empowering the people; they were rather concerned about the success of the project (Twyman, 2000).

Where decision-making processes are not transparent, participation processes face difficulties and end often in project failures. Information is needed by all stakeholders to make informed decisions and also to be clear about their roles and those of other stakeholders (Garande and Dagg, 2005). Community participation is hampered by insufficient knowledge or information. In the Molinos water project in Chile there was minimum involvement of the community members and lack of comprehensive communication between the NGO (provider of the water facility) and the community. The NGO had prior discussions with the central government officials and the regional authorities. The only type of consultation with communities was with few individuals at the planning phase; this showed lack of transparency and resulted in lack of confidence in the project (Garande and Dagg, 2005).

To enhance the legitimacy of management decisions stakeholder participation is applied. The basic assumption is that stakeholder participation could enhance legitimacy and increase compliance (see 2.5.3). Community participation in the management of natural resources increases the willingness to implement decisions and even prevent misuse and degradation of the resources (Porto and Kelman, 2000). For example, local communities in the Kihansi River Catchment area and Mwanza Region in Tanzania were involved in

policymaking and independent decision-making at the community level. The communities enacted local bye-laws to protect their water source. This demonstrates the ability of local institutions to develop rules and regulations that enable them to effectively manage water resources. The participation of the stakeholders in the identification of problems was helpful in the search for sustainable solutions that were effective and acceptable in their own communities. The legitimacy of the decision taken facilitated behavioural change and compliance (Dungumaro and Madulu, 2003).

Sometimes stakeholder participation is pursued to increase project effectiveness (see 2.5.3). This was demonstrated in the two World Bank assisted rural water and sanitation projects in Karnataka and Uttar Pradesh states in India to increase the effectiveness of rural water supply (Prokopy, 2005). The promotion of community participation by NGOs and the local government in Yélékébougou in Western Mali was focused on promoting payment for O&M of water facilities to enhance sustainable accessibility to water and thereby project effectiveness. This was influenced by the global policy consensus of recovering costs for O&M from users themselves (Jones, 2011). Another example is the Koro District rural water supply project in Central Mali. The West Africa Water Initiative (WAWI) initiated participatory water resource management schemes to increase project effectiveness in the form of sustainability in rural water supply. The project was not sustained because the communities were not involved in the initial processes by the implementing agency (Gleitsmann et al., 2007).

Stakeholder participation is also interpreted to mean a social learning platform. Community participation in developing and managing land and water resources may ensure incorporation of local knowledge into projects as well as meeting the needs of the stakeholders. The rural water supply project in Koro District showed that appropriate design depends upon the communities' needs and preferences. Without input from the diverse members of the communities, it is unlikely that an externally chosen infrastructure will be appropriate. A deliberative process in negotiating the design, norms of access, and management of the water supply would have enhanced social learning between the different stakeholders (the WVI-Mali and the beneficiary communities) that in turn would have enhanced the sustainability of the technologies (Gleitsmann et al., 2007).

The concept is interpreted in the light of transparency, accountability and efficiency. The committees of the water user groups (WUGs) in the HESAWA programme in Tanzania held meetings with all users once every three months and when deemed necessary. The sub-committees met once every month. The water user committees collected operational and maintenance funds and deposited them in a bank account for the maintenance of the water facility. Financial management systems were regularly audited to ensure transparency and accountability (Rautanen et al., 2006).

Legitimacy gained for decisions made facilitates compliance with bye-laws. Neglect of stakeholder participation in initial stages of projects results in unsustainability of water projects. Regular meetings between local water agencies and communities as well as regular auditing of financial management systems ensure transparency and accountability.

Lack of communication between authorities and beneficiary communities may result in lack of confidence and affect project goals.

Participation is operationalised through the creation of 'invited spaces' where people are 'invited' to participate by government agencies or NGOs as part of interventions designed to empower stakeholders or solve problems. Such an approach is transformative as it empowers stakeholders. For example, water users associations (WUAs) and local water committees are formed to provide forums for participation in the cases reviewed. The local water agencies are used as a mechanism to leverage the involvement of stakeholders in taking part in decision-making processes (Prokopy, 2005; Echavarria, 2002). The local water agencies take an active role in operating, maintaining and safeguarding water installations (Rautanen et al., 2006; Memon, 2004).

### **3.4 The Extent of Stakeholder Participation in the Various Cases**

Stakeholders have different types of resources such as power, knowledge, and wealth. The degrees to which they possess each of the different resources affect the extent of their involvement. For instance in the Save Catchment and Odzi Sub-Catchment case in Zimbabwe the economically and politically empowered stakeholders, the mining companies and the commercial farmers, were participating stakeholders in the Catchment and Sub-Catchment Councils. They had the right to determine who got and retained a water permit. Their participation was intensive because of their active role in decision-making. The level of participation of the economically poor and powerless, the communal and resettlement farmers in decision-making process was low. Because the farmers were not participating stakeholders in the Catchment Council they eventually lost their existing access to water to the big companies (the mining companies and the commercial farmers) (Dube and Swatuk, 2002; Kujinga, 2002).

Variations in land holdings brought about different levels of participation in the Haryana joint participatory forest management project between the (wealthy) landowners and the (poor) landless. Every villager (landowners and landless) had a right to the same amount of dam water. The landless could sell their water rights to the landowners but this mechanism did not work. The landless could not benefit from the dam water and therefore were unwilling to participate. As a result, their participation in taking care of the forest was low (Lise, 2000).

In the Lerma-Chapala Basin in Mexico, municipalities and water users had a say in management decision-making but the role of the central government was paramount. The federal government through the National Water Commission (CNA) grants water rights and groundwater concessions and manages dam and main canals. The Water User Associations (WUAs) were empowered to manage secondary irrigation units (Wester et al., 2003).

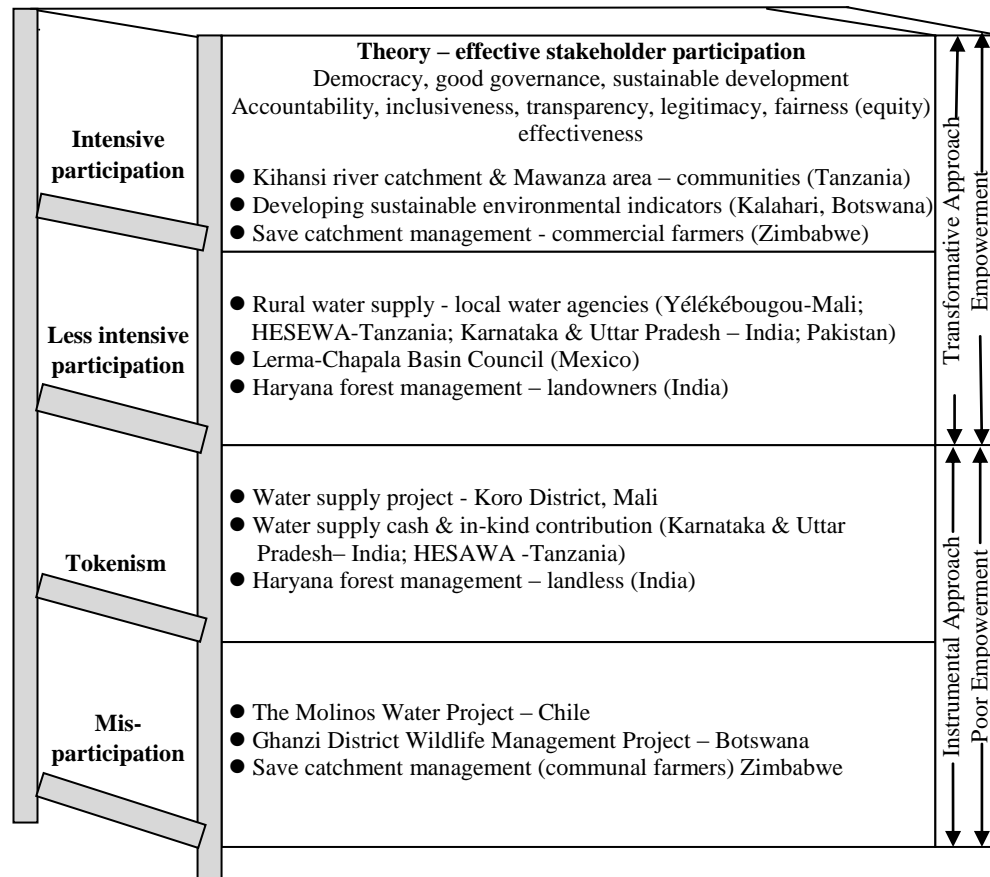
Local water committees in the rural water supply schemes were involved in making decisions on O&M. They were also involved in siting water facilities. Examples are the WUGs of the HESEWA programme in Tanzania and the VWSCs of Karnataka and Uttar Pradesh water project in India. The situation was different in other rural water supply projects. The type of participatory process employed by World Vision's West Africa Water Initiative (WAWI) project in the Koro District in Mali took the form of World Vision's WAWI presenting its pre-determined project objective of improving water

access conditions in the region at the mayor's office. This is an example of token participation. World Vision's WAWI made final decisions by making a final selection of villages that were to benefit from the project as well as choosing the technology. The villages indicated their willingness to be provided with the water facility by contributing an amount of money. This was the primary reason for non-use of previously installed hand pumps in the villages (Gleitsmann et al., 2007).

Power differentials among stakeholders reduce the intensity of involvement in decision-making of the powerless. The powerless feel intimidated and are at times put at a lower profile in their relationship with authorities or other stakeholders. A project can be 'participatory' but can have power dynamics at play. Instead of the officials empowering the community, the community members were made to comply; and they were dictated to instead of participating willingly. This power dynamics was illustrated by the community development and conservation programme in Western Botswana where the district-level Department of Wildlife and National Parks officers asserted power through the project, which gave natural resource rights to the communities. Nevertheless, the power relations made the community afraid to question or reject government assistance. They did not have the power to redirect the assistance to be more appropriate or relevant to their needs (Twyman, 2000). Participation of the locals can be described as low, at the level of mis-participation whilst that of the officials was intensive in this particular situation. The locals were informed about decisions that had already been taken.

Figure 3.1 shows the dominant level of intensity of stakeholder participation and corresponding participatory approaches in the case studies. Intensive stakeholder participation theoretically promotes effective participation. So effective participation is at the top rung of the ladder where participation is intensive. The different rungs are the different levels or intensity of stakeholder participation labelled on the left side of the figure. These are the dominant levels of intensity. Participants in the corresponding cases/projects/activities in the middle of the figure participated at these levels.

The two segments on the right side of the figure show the two approaches to stakeholder participation. These are the dominant approaches applied in the corresponding cases/projects/activities in the middle of the figure. Thus, instrumental approaches were dominant in the cases/projects/activities at the two bottom rungs. The result was that the participants were not empowered. Transformative approaches, on the other hand were dominant in the cases/projects/activities at the two top rungs and these led to the empowerment of the participants. This explanation applies to the complex ladder of stakeholder participation in this and subsequent chapters.



**Figure 3.1 Application of the Complex Ladder of Stakeholder Participation to the Cases from Developing Countries**

### 3.5 Benefits and Problems of Stakeholder Participation

Stakeholder participation has many outcomes depending on the objectives of the programme to which it is applied. This section discusses the beneficial outcomes and problems of the participatory processes in the cases/projects reviewed.

#### 3.5.1 Benefits of Stakeholder Participation

There is the benefit of knowledge acquisition. Participants through training workshops gain knowledge, which directly or indirectly can be used to improve their livelihoods. Examples are the water supply projects in Yélékébougou in Western Mali (Jones, 2011), HESAWA in Tanzania (Rautanen et al., 2006), Karnataka and Uttar Pradesh project in India (Prokopy, 2005), and in Pakistan (Memon, 2004). In the development of sustainable environmental indicators in Botswana, Reed et al. (2008) and Fraser et al. (2006) observed that each participant's knowledge increased as they shared and evaluated their knowledge at focus group meetings and discussions. The process of identifying indicators also built capacity within the communities.

In most water supply schemes, communities make cash and/or in-kind contributions. Contributions made by communities tend to lower investment costs of water projects for governments and implementing agencies. Examples are the Pakistan rural water supply

scheme (Memon, 2004); Karnataka and Uttar Pradesh rural water supply projects in India (Prokopy, 2005); and the Health through Sanitation and Water (HESAWA) programme in Tanzania. In the early stages of the HESAWA programme, local contribution enhanced the sense of ownership among users as well (Rautanen et al., 2006).

Stakeholders also improved implementation in catchment management through cash contributions. In the Cauca Valley in Colombia for instance, WUAs financed watershed protection activities (Echavarria, 2002). The handling of water permit application processing and approval by the Odzi Catchment Board at the basin level in Zimbabwe was faster than when it was handled at the national level (Kujinga, 2002). In this way participation brought about efficiency in implementation. Another example is the improved forest protection by communities in Haryana and Bihar forest management projects in India. In these forest management projects the communities benefited by having access to irrigation water and non-timber forest product as well as an income supplement (Lise, 2000).

Stakeholder participation in water supply improves accessibility and reliability of drinking water to the stakeholders. In cases such as the rural water supply schemes in Karnataka and Uttar Pradesh in India household involvement in decision-making and community contribution towards capital costs of water facilities helped to improve water delivery in terms of equal access to water and time savings in fetching water (Prokopy, 2005). The explanation given for such a development was that the higher the number of households that contributed to capital costs the less the cost for households' utilisation of facilities hence the less the number of households excluded from the use of the water facilities. In addition, when more households contributed to capital costs, facilities were located centrally so that more households enjoyed time savings. Enhanced water delivery, in terms of accessibility, was achieved through participation in decision-making by the villagers, which influenced the design of projects to meet the unique needs of each village (Prokopy, 2005).

Other examples of improved water supply were the community participation in operation of the rural water supply project in Pakistan, which improved the quality, and reliability of water (Memon, 2004). The participation of the villagers in the HESAWA programme in Tanzania improved the water supply services in terms of accessibility. About one third of the total population of the three regions (Kagera, Mwanza and Mara Regions) received new or improved water supply service. This was considered as an achievement of the water supply activities (Rautanen et al., 2006).

Involvement of communities in identification of problems resulted in sustainable solutions that were effective and acceptable to the communities. The participation of local communities in finding a solution to problems in the Kihansi River Catchment area and the Mwanza Region in Tanzania resulted in development of local strategies to protect water resources. It also led to behavioural change and high compliance to decisions taken in protecting rivers from pollution and silt sedimentation and protection of drinking water sources (Dungumaro and Madulu, 2003).

### 3.5.2 Problems of Stakeholder Participation

“Participation discourse draws attention away from the very real social and economic differences between people and the need for redistribution of resources, entitlements, and opportunities” (Wester et al., 2003: 798). For Cullet (2009), participation may create the impression that providing landowners greater control is synonymous with creating truly participatory system. They go on to explain that defining stakeholders as water users with water rights or land holdings tends to divert attention away from the needs of the landless, the poor and others without water rights. In the Haryana forest management case, the landless could not benefit from dam water though, in principle they had the right to the same amount of water from the dam as the landowners. The mechanism was such that the landless could sell their water rights to landowners but the more powerful landowners disregarded that mechanism (Lise, 2000). Another example is in the Cauca Valley in Colombia where large-scale agricultural water users were involved in planning and implementation of management plans in the protection of watersheds. The Cauca Valley Corporation (CVC), which is the regional environmental authority, gave them water permits but was not able to provide permits as well as charging fees to small-scale producers due to the high logistical costs of overseeing such a system (Echavarria, 2002). Such a situation yielded social inequity between the large-scale producers and the small-scale producers.

In some instances, some relevant stakeholders were left out in decision-making bodies of river basins. A clear example is found in the Lerma-Chapala River Basin in Mexico, where sub-basin water user committees formed part of the River Basin Council. The sub-basin water user committees were to represent all water users but only water users with licenses were eligible to elect the committee members. This prevented a majority of water users (rural poor and the irrigation units that depended on surface water) in the basin from having a voice. The governing board of the Council had other representatives who were nominated from the assembly-of-user representatives from different water-use sectors by a government official. These representatives were not known to, and they did not necessarily reflect the interests of the water-use sector that they represented (Wester et al., 2003).

Zimbabwe Farmers Union (ZFU) represented communal and resettlement farmers on the Save Catchment and Odzi Sub-catchment Councils but not all of the communal and resettlement farmers were members of the ZFU. Small-scale irrigators also were not represented fully on the Councils. Non-consumptive users (national parks and tourism operators) had no representation. Therefore, those not represented did not participate in decision-making about the management of the water resource (Kujinga, 2002; Dube and Swatuk, 2002). Two small-scale irrigation schemes accused the government of passing laws such as the Water Act without consulting them and hence refused to be involved. They therefore refused to participate in the Save Catchment and Odzi Sub-Catchment Councils’ activities in Zimbabwe. This points to the fact that lack of substantive stakeholder representation is a challenge facing participatory processes in developing countries and in particular on river basin boards.

Severe power differentials between stakeholder groups in the Save Catchment Council made the Council develop strategies that did not facilitate social learning to the extent that some groups preferred not to be part of the catchment council (Kujinga and Manzungu,



2004). Technical knowledge was privileged over 'traditional' ways of knowing at Council meetings. The few individuals with technical knowledge dominated in discussions at the Sub-Catchment Council meetings (Dube and Swatuk, 2001; Kujinga, 2002). The Lerma-Chapala River Basin Council also tended to be dominated by government agencies (Wester et al., 2003). The continued government dominance slows democratisation of river basin management.

Planners especially in formal development projects ignore local communities and their local knowledge. Governments and development agencies ignore locals in decision-making or planning of projects. The inhabitants of Molinos in Chile who were not involved in the decision-making process of a water project exemplify this. This approach suffered the challenge of fully integrating the community in project implementation. It resulted in the community not having confidence in the project. There were disagreements about siting of the treatment plant. Eventually the project came to a halt (Garande and Dagg 2005). Another example is the rural water supply project in the Koro District of Mali where the World Vision did not involve the communities in the design phase of the project and ended up with boreholes with pumps, which were not patronised by the communities and were not sustained.

Another challenge that confronts stakeholder participation is meeting different interests. The Molinos water project in Chile exemplifies this, where there were several different interests from different sources in the valley. Secured irrigation water was the main concern of the people downstream, as their drinking water was not affected by arsenic contamination whilst the community upstream was concerned about arsenic contamination and therefore accepted the provision of a water treatment plant. This resulted in conflict between the upstream and downstream users (Garande and Dagg, 2005).

Due to the economic and technological state of developing countries resources in the form of time, human and finance to carry out participatory processes are difficult to come by (WMO, 2006). The water supply projects all relied on foreign donor funds. There are inadequate financial resources for catchment councils for use in water management. Catchment councils in Zimbabwe exhibited this. The Save Catchment and Odzi sub-Catchment Councils had difficulties in developing their own sources of income that could enhance self-reliance, decision-making autonomy and participatory democracy. They had to rely on donor funds from developed countries which could not be sustained (Kujinga, 2002). Manyame Catchment and the Upper Manyame Sub-catchment Councils in Zimbabwe do not have the financial resources needed to undertake an inclusive catchment planning process and to publicise the functions of the councils (Mabiza et al., 2006).

Only one person in the Odzi Sub-Catchment and the Save Catchment was found suitable as a training officer to carry out an outreach programme aimed at educating stakeholders about the water management reform (Dube and Swatuk, 2002). Table 3.2 represents the benefits and problems of stakeholder participation from the cases in developing countries.

**Table 3.2 Benefits and Problems of Stakeholder Participation from Developing Countries**

Issues	Benefits	Problems
Resource management	Incorporation of local knowledge in decisions	Spreads financial and human resources thinly over too many issues
Project sustainability	Development of effective & acceptable local strategies for water protection	Inability to meet many and diverse interests
Project efficiency	Improved project implementation efficiency	
Decision-making bodies	Inclusion of local people in decision making process	Inadequate and inappropriate representation: - exclusion of some relevant stakeholders; domination of some groups
Capacity of stakeholders	Capacity building & knowledge acquisition	Insufficient knowledge/information given to stakeholders, therefore cannot make informed decisions
Water supply systems	Improved quality, accessibility & reliability of drinking water to stakeholders	Exclusion of beneficiary stakeholders in the initial stages. Promotion of payment for water excludes the poor from getting access
Distribution of resources & benefits	More spread	Little attention given to socially and economically poor people

The benefits of participation, all things being equal, should be more visible in the developed countries as a result of the lower financial and human resource challenges. Developed countries tend to have a strong and well-established base of multidisciplinary specialists who engage in water resource management and other actions. They also have strong economic and technological state and tend to be more competent in the participatory processes (Funke et al., 2007).

Unlike the experiences from the developing countries the participatory literature from developed countries, shows that, the gains of stakeholder participation are more of improving the quality of the decision-making processes (De Stefano, 2010; Reed, 2008; Videira et al., 2006; Mostert, 2006). The involvement of stakeholders is likely to bring about open and transparent governance, accountability, conflict reduction, legitimacy and social learning.

### **3.6 Factors Affecting Stakeholder Participation**

A number of factors affect participation. Neysmith and Dent (2010) group these factors into four categories: socio-cultural, economic, situational, and developmental factors. They see socio-cultural factors as the most important factors in determining an individual's willingness to participate. Socio-cultural factors such as class, ethnicity and gender can play a role in creating the power imbalances (Berkes, 2004) and prevent participation by certain groups.

Lack of financial resources or monetary constraint is a barrier to participate for disadvantaged individuals or ordinary citizens (GWP, 2000; Griffin, 1999). Irvin and Stansbury (2004) establish that disadvantaged groups are more concerned about income-generation activities and daily family needs than in other participatory activities. The influence of the socio-cultural setting as well as the economic setting in the Densu Basin in Ghana is examined in Chapter 8 to see how these play out in the rural areas in Ghana.

Where multi-cultural groups co-exist there is the tendency for one group to dominate in the decision-making process – elite capture. In the Save Catchment Council in Zimbabwe there was dominance of one ethnic group because they had the knowledge, power, influence and were also rich (Dube and Swatuk, 2002).

Structural or personal factors (age, level of education or literacy and gender) affect the ability of individuals to engage in the forms of participation (Jones, 2011; Cleaver and Toner, 2006). Age becomes a key issue where the power distance is great due to cultural norms. A youth may not share ideas with adults. On a different level, the aged may not be able to engage in forms of participation that involve strenuous activities.

An individual's level of literacy has a significant influence on his/her ability to participate as a leader or on public committees. Reed et al. (2008) observe in Botswana that people with a high level of formal education are able to conceptualise and articulate indicators more easily than those with less formal education.

Gender and culture have been noted as important factors influencing participation, particularly in rural water governance (Sultana, 2009; Singh, 2008; Cleaver and Toner, 2006). Activities and responsibilities concerning access to water are affected by gender roles: women fetch water for domestic purposes and keep pumps clean; men dig wells, fix pumps and collect water for animals or for making mud bricks in Mali. The gendered roles explain why women are not part of water management committees, because it is the job of men to bring water to the village, but the task of women is to bring it to the home (Jones, 2011; Sultana, 2009). Also few women were involved in formal decision-making bodies on the Save Catchment and Odzi Sub-Catchment Councils in Zimbabwe because of cultural reasons (Dube and Swatuk, 2002).

The processes of empowering communities through participatory methods often become influenced by culture. Therefore, knowledge of cultural settings becomes relevant in the consultation processes. Resurreccion et al. (2004) report that women were not culturally, allowed on the irrigation committees (ICs) in the Upper Ping River Basin in Northern Thailand. Male farmers and water users dominated in the ICs because irrigation farming was traditionally seen as man's work. Women were excluded at every level of consultation and participation and from decision-making processes as well.

A comprehensive interaction with the community including local authorities and traditional leaders by the implementing agencies helps the agency to learn about the socio-cultural setting of a community. Knowing about the socio-cultural settings in turn helps to determine the feasibility of carrying out a project in an area and engaging the stakeholders as well. This became known as the Molinos water project in Chile came to a standstill (Garande and Dagg, 2005).

Dependency on the resource is a factor affecting participation. The villagers involved in the Haryana and Bihar forest management in India and communities in Yélékébougou, Mali demonstrated this. Participation was high amongst villagers who depended highly on the forest (Lise, 2000). Communities in Yélékébougou, Mali, that depended solely on

hand pumps for drinking water participated in the up-keep of the pumps, whereas, those who had alternative sources did not participate in the up-keep of the pumps (Jones, 2011).

External policy direction influences the adoption of stakeholder participation in the development processes. For example, the UN Conventions ratified by governments led to increased level of community participation in environmental management in Botswana (Fraser et al., 2006).

### **3.7 Inferences**

The chapter explored how the concepts of stakeholder participation are interpreted and applied in developing countries. Interpretation of stakeholder participation varied depending on the objective of the project or intervention. It meant a) distributing power from the centre to the local; b) building the capacity of stakeholders to enhance meaningful involvement; c) increase in dialogue in development decision-making; d) risk and benefit sharing; e) information sharing; and f) social learning. (g) It also meant creation of platforms for people to be involved, through local water agencies in water supply; and by way of basin boards or councils in catchment management. The sustainability of projects therefore depends on active local water agencies.

The range of benefits of stakeholder participation experienced in the developing countries included the development of effective and acceptable local strategies for water protection; improved project implementation efficiency; inclusion of local people in decision-making processes (therefore empowering them); and improved quality, accessibility and reliability of drinking water to stakeholders.

There is increased knowledge and skill development of stakeholders when they participate actively in activities involving people with diverse backgrounds. However, where inadequate information is given these are limited. Examination of the levels of participation by the various stakeholders at different levels of governance will be a good consideration for this study. It will also help to access the associated skills acquired and hence be able to suggest strategies for better water governance. Creation of local water agencies served as a way of expanding the space for stakeholder participation. It is important therefore to examine the activities of local water agencies to expound how their activities can improve stakeholder participation or otherwise.

Application difficulties of stakeholder participation in developing countries are associated with human and financial resources. Participatory processes are resource intensive because of the large numbers of participants and the need for capacity building in some cases. On a different level is the neglect of local knowledge input. It therefore becomes critical for this study to assess the state of these resources and the extent to which local content is considered in Ghana's experiment with stakeholder participation in the water sector.

Success stories experienced were from cases where stakeholders were informed and consulted in the early stages of projects. Regular meetings of committees with users ensure transparency, accountability and efficiency but lack of communication between authorities and the community shows lack of transparency. Therefore, how information is disseminated through the decentralised management structures should be another focus of the study.

Socio-cultural, economic and developmental factors dictate the extent to which the benefits of stakeholder participation in the water sector are achieved. These factors vary from country to country. This has implications for this study. The data collection ought to take into consideration the nature of these factors in order to explain how stakeholder participation can be of any benefit under a given situation.

Most of the developing countries where stakeholder participation is applied have a decentralised governance system. Decentralisation creates a conducive environment for stakeholder participation to thrive. It will be interesting to look at how Ghana's decentralised policy and water policy incorporate stakeholder participation and to examine how decentralisation influences participation in Ghana in the subsequent chapters.

## 4 Stakeholder Participation and Decentralisation Policies in Ghana

### 4.1 Introduction

Local level participation is known to be effective when there is devolution of power from the centre to the local level (Jaspers, 2003). Decentralisation allows decision-making for development at the local level (Ouedraogo, 2005). In assessing how practice in Ghana matches theoretical expectations and experiences of stakeholder participation, this chapter discusses the decentralisation policy and stakeholder participation in Ghana. What accounts for Ghana's decentralisation policy and how was it adopted? To what extent does the decentralisation process in Ghana conform to the theoretical expectations in promoting participation at the local levels? To what extent does the water policy relate to the decentralisation policy? In finding answers to these questions, I made use of content analysis of policy documents, legal documents on decentralisation and participation and analysis of data from key informants and individual interviews.

The next section (4.2) discusses the decentralisation policy in Ghana. Section 4.3 assesses the law and policy on decentralisation in Ghana. The chapter then tries to establish the link between the decentralisation policy/law and the water policy (Section 4.4) before making inferences in Section 4.5.

### 4.2 Decentralisation Policy in Ghana

This section has four subsections. It first looks at the onset of Ghana's decentralisation policy (4.2.1), and then the main legislation with respect to decentralisation and local government (4.2.2). It follows with the structure of the local government (4.2.3) and the decentralised participatory development planning system (4.2.4).

#### 4.2.1 The Onset of Ghana's Decentralisation Policy

Ghana experienced political instability and economic decline since its independence in 1957. After the overthrow of the first civilian government in 1966, Ghana had a series of military rulers intermitted with short-lived civilian governments. During the period, Ghana experienced alternations between authoritarian and democratic rule (Crook and Manor, 1998).

The worse economic decline period was during the economic recession in the late 1970s and early 1980s, when the public services disintegrated and government lost much of its authority. This period ended up in a revolution and the installation of Jerry John Rawlings and the Provisional National Defence Council (PNDC), a military government, in 1982. The revolution stressed the need for genuine accountability and popular participation in public life. The PNDC planned and implemented decentralisation reforms between 1982 and 1992 (Ayee, 1997).

The PNDC government experienced pressures from workers and students over hardships brought about by the economic recovery programme and the structural adjustment programme in the mid 1980s. The military government had a legitimacy crisis. The PNDC government realised that the international donors on whom it depended would

approve of the creation of elected decentralised bodies because the donors exerted pressure for economic recovery, restructuring, liberalisation and democratisation. It (the PNDC) then decided to use the decentralisation programme as a political strategy to placate these pressures and avoid a legitimacy crisis. This solution seemed to satisfy all sides (Ayee, 1997; Mohan, 1996). These driving forces to decentralisation are similar to some of those found in the literature (see Section 2.4). These were some of the implicit factors that influenced decentralisation.

Prior to this, between 1957 and 1988, successive governments in Ghana tried to decentralise authorities to the local level with little progress. Decentralisation of development decision making to local levels in Ghana became actively pursued in 1988 when the Local Government Law of 1988 (PNDC Law 207) was introduced. The law established the legal framework for the establishment of District Assemblies (DAs) as local authorities. The DAs were based on the then existing administrative districts. The number of local authorities was reviewed and it was increased from 65 to 110 in 1988 (Crawford, 2004b; ActionAid, 2002).

The decentralised system was formulated into a four-tier system consisting of regional, district and local councils, and towns and village development committees. The district councils were made the seat of local government with administrative and executive power for local level development and governance (World Bank, 2003).

The structure of governance and participation at the local level is enshrined in the 1992 Constitution and the Local Government Act 462, 1993. The 1992 constitution stipulated that Ghana shall have a decentralised local governance system and in 1993 the Local Government Law of 1988 (PNDC Law 207) was replaced by the Local Government Act 462, 1993 (Zanu, 1996). In 2004 the number of assemblies was reviewed again and 28 new ones were created (bringing the number of the DAs to 138) to advance decentralisation (The Local Government System, 2006). The number of DAs in 2012 was 170 and the government had intentions of increasing the number.

The aim of the local government reform was to transfer functions, powers, skills and competences, and means and resources from the central government to the local government. The intent was to establish a forum where at the local level where local participants are able to discuss development problems of the district and/or area and their underlying causative factors. These local participants include development agents and representatives of the people. Decentralisation and devolution of power from the central government to the District Assemblies and grassroots was done to enable individuals and communities participate in the political and administrative decision-making process. This was done in pursuit of good governance (Ahwoi, 2010). Explicitly the objectives for promoting decentralisation in Ghana include empowerment, participation, accountability, stability, effectiveness and efficiency. It was expected to open up democratic politics as well (Ayee, 1997). Decentralisation was also pursued to satisfy young aspiring politicians who were frustrated with limited political opportunities. However, it is claimed that the then PNDC government used decentralisation to hide its political agenda of building a rural power base; and also to stabilise a political system in crisis (Ayee, 1996; 1997). This type of driving force for decentralisation is also noted in the literature (see Section 2.4).

Ghana's current democratic transition took place in 1992 when Ghana returned to constitutional rule. Ten years after, Ghana was viewed as one of the few African countries involved in attempted democratic transitions in the early 1990s that still appeared to be advancing in democracy (Carothers, 2002). This was attributed to political stability and relatively little ethnic conflict in Ghana compared to the other African countries (Gyimah-Boadi, 2001).

#### 4.2.2 Main Legislation Pertaining to Decentralisation and Local Government in Ghana

The legal regulations of decentralisation are presented in Table 4.1. The 1992 Constitution demands the transfer of functions, powers, responsibilities and resources from central government to local government units in a coordinated manner through the enactment of laws by parliament. This position is strengthened by the Local Government Act 462, 1993. This Local Government Act provides elaboration on Chapter 20 (Articles 240-256) of the Constitution on decentralisation and local government.

**Table 4.1 Legal Regulations of Decentralisation**

Year of Enactment	Law	Content
1988	Local Government Law, PNDC Law 207	Establishment of District Assemblies; spelling out their responsibility for the overall development of their districts
1992	Constitution of the Republic of Ghana Chapter 20: Articles 240-256	Broad framework for decentralised local government and administration
1993	Civil Service Law, PNDC Law 327	Administration and management of local governments; establishment of Ministry of Local Government as the local government secretariat under the office of the President
1993	District Assemblies Common fund Act 455	Establishment and allocation of funds to District Assemblies
1993	Local Government Act 462 (replaced Local Government Law, PNDC Law 207 of 1988)	Democratisation of state's power, sharing of authority between central and sub-national governments; establishment and regulation of local government system
1994	National Development Planning Commission Act 479	Participatory development planning; spelling out of the role of the NDPC in the development planning policy; its relationship with other authorities
1994	National Development Planning (system) Act 480	Framework for decentralised planning. Spelling out planning functions of regional, district and sub-district planning authorities.
2003	Local Government Service Act 656 (amended portions of the Civil Service Law, PNDC Law 327 of 1993)	Administration and management of local governments

In compliance with Article 240 Section 2 (b) of the 1992 Constitution, which requires that by law the capacity of local government be enhanced to plan, initiate, co-ordinate,



manage and execute policies regarding matters affecting the people, Section 46 of Act 462 establishes the District Assemblies (DAs) as the district planning authorities in their areas. The National Development Planning (system) Act 480 of 1994 makes the DAs district planning authorities and transfers to them development planning functions. The Local Government Act 462, 1993 provides for the availability of development planning capacity at the district level by providing for the establishment of a District Planning Coordinating Unit (DPCU) and the post of District Planning Officer. Section 46 of Act 462 requires that the DPCUs comprise of professional staff to carry out the planning functions of the assemblies. However, Acts 462 and 480 do not provide for the detailed composition of the DPCUs and rather requires the District Planning Authorities to consult the National Development Planning Commission (NDPC) on it. Section 2 of Act 480 reinforces the functions of the District Assemblies by providing additional planning functions of the District Planning Authorities. The National Development Planning (system) Act 480, 1994 supports the Local Government Act 462, 1993 by providing for development planning at district and sub-district level and participation of local communities in planning. It requires public hearings on proposed plans before adoption.

Article 86 of the 1992 Constitution and Section 1 of Act 479, 1994 establish the National Development Planning Commission. The planning functions of the Commission are spelt out in Article 86 of the 1992 Constitution and Section 2 of Act 479, 1994. The Local Government Service Act 656, 2003 strengthens the Local Government Act 462 and the National Development Planning (System) Act 480 by making provision for the Local Government Service to assist the Regional Co-ordinating Councils and the DAs in the performance of their functions as prescribed under these Acts (462 and 480).

Article 240 Section 2 (a) of the Constitution requires parliament to enact appropriate laws to ensure that resources are transferred from central government to local government units in a coordinated manner. Section 2 (c) of the same Article provides for the establishment of a sound financial base for each local government unit. Article 252 Section 2 also establishes the District Assemblies Common Fund (DACF) and provides that no less than five percent (now no less than 7%) of the total revenues of Ghana are to be allocated to the District Assemblies for development. The District Assemblies Common Fund Act 455, 1994 supports Article 240 Section 2 (a) by requiring transfer of resources to the District Assemblies. Strengthening Article 240 Section 2 (c) of the Constitution are other legislation on local government revenue. These include Section 34 of the Local Government Act 462 and Parts IV, VIII of the same Act on licences, rates and fees.

The Local Government Act 462 of 1993 Section 10, sub-section 3 (a) (i and ii) requires the District Assemblies to prepare a district budget. It states, “a District Assembly shall be responsible for the overall development of the district, and shall ensure the preparation and submission through the Regional Coordinating Council of development plans of the district to Commission for approval; and of budget of the district related to the approved plans to the Minister for Finance for approval”. Section 92 (3) of the Local Government Act 462, 1993, provides a clear district budget requirement; it includes the aggregate revenue and expenditure of all departments and organisations under the District Assembly and the District Coordinating Directorate, including the annual development plans and programmes of the departments and organisations under the Assembly. This is referred to

as a composite budget<sup>6</sup> (Zanu, 1996; Kokor, et al., 2008) and it is distinct from sectoral budgeting. Section 38 of Act 462 also makes each District Assembly responsible for the preparation as well as administration and control of budgetary allocations of the departments under it. These departments are specified in the First Schedule of Act 462 (Local Government Act 462, 1993, Section 38) (see Appendix III).

#### 4.2.3 Structure of Local Government and Functions of its Agencies

There are ten regions in Ghana. Each region is divided into a number of districts depending on the population of the region (see Table 4.2 for the population size of a district). At the district level are the Metropolitan/Municipal/District Assemblies (MMDAs), which are the principal units of local government.<sup>7</sup> Between the MMDAs and the central government are the Regional Coordinating Councils (RCCs). The RCCs are at the regional level. The RCCs consist of the regional minister (a government appointee and representative of central government in the region) as chairperson and his/her deputies; presiding member of each MMDA and District Chief Executive of each district in the region; two chiefs from the Regional House of Chiefs; and the regional heads of the decentralised ministries without voting rights. The Local Government Act 462, 1993, Section 140 established the RCCs to coordinate the decentralised development efforts of the MMDAs, in the regions. The role of the RCCs is administrative and coordinating (includes coordination of policy implementation amongst the District Assemblies) rather than political and policymaking (Sections 141 and 142 of the Local Government Act 462, 1993). However, the District Assembly performs deliberative, legislative and executive functions (Local Government Act 462, 1993) (see Table 4.2 for the features of the local government structure).

The MMDAs are the pivot of administrative and development decision-making organs in the districts. Act 462, Section 3 of the Local Government Act, 1993, established the MMDAs. They consist of the District Chief Executive (DCE) who is appointed by the President, the central government, with prior approval of not less than two-thirds majority of the District Assembly members present and voting (Section 20 (1) of Act 462); members of parliament from the district (have no voting rights<sup>8</sup>). One elected member from each of the electoral areas in the district (forming two-thirds of the members); and not more than 30 percent of members appointed by the President in consultation with traditional leaders and other interest groups in the district. The appointment is done in order to provide balance between national interests and local interests as well as have people with skill and expertise. The Assembly has a presiding member who is elected from among its members by two-thirds of all members of the Assembly (Section 5 (1) of Act 462). The Assemblies are supposed to exercise political and administrative authority in the district. In addition they supervise all administrative authorities as well as providing guidance and direction in the district.

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<sup>6</sup> Composite budget is “an integrated budget which synthesises and harmonises expenditure and revenue estimates of programmes of all departments of the MMDAs” (Zanu, 1996).

<sup>7</sup> Metropolitan/Municipal/District Assemblies (MMDAs) and District Assemblies (DAs) are used interchangeably in this thesis.

<sup>8</sup> Can create problem; refer to section 4.3.

**Table 4.2 Features of the Local Government Structure**

Unit	Population Hosted	Area of Jurisdiction	Composition	Functions
Metropolitan Assembly	Over 250,000	One-town/city Assembly	1 member per electoral area + 30% appointed by central government	Administrative, legislative, executive, planning & rating
Municipal Assembly	95,000 and over	One-town Assembly	1 member per electoral area + 30% appointed by central government	Administrative, legislative, executive, planning & rating
District Assembly	75,000 and over	Several towns and villages	1 member per electoral area + 30% appointed by central government	Administrative, legislative, executive, planning & rating
Sub-Metropolitan District Council	Information not available	Larger parts of a Metropolitan District	All elected + appointed MA members resident in the Sub Metropolitan District ( <i>Between 25 &amp; 30 members</i> )	Administrative and revenue collection
Town/Area Council under Sub-Metropolitan District Council	15,000 and over	Known parts/suburbs of a Sub Metropolitan District	10 rotational representatives of Unit Committees + 5 MA members of the area ( <i>15 members</i> )	Enforcement, mobilisation
Zonal Council	3,000	Zones or parts of a Municipality	10 representatives of Unit Committees, up to 5 MA members + 5 appointed members ( <i>Between 15 &amp; 20 members</i> )	Administration, Enforcement, mobilisation
Urban Council	15,000 and over	Cosmopolitan in character	12 representatives of Unit Committees, up to 8 DA members + up to 10 appointed members ( <i>Between 25 &amp; 30 members</i> )	Administration, enforcement, mobilisation
Town Council	Between 5,000 and 15,000	One town	10 representatives of Unit Committees, up to 5 DA members + up to 5 appointed members ( <i>Not more than 20 members</i> )	Administration, enforcement, mobilisation
Area Council	Less than 5,000 per town or village and combining up to 15,000	Group of villages or small towns	10 representatives of Unit Committees, up to 5 DA members, +up to 5 appointed members ( <i>Not more than 20 members</i> )	Administration, enforcement, mobilisation
Unit Committee	500-1,000 in rural and 1,500 in urban areas	Parts of towns, zones or whole villages	10 directly elected + up to 5 appointed members ( <i>Not more than 15 members</i> )	Enforcement, mobilisation

Source: Constructed based on Ahwoi (2010), World Bank (2003), ActionAid (2002), Crook and Manor (1998), Zanu (1996).

There are three sub-district level structures which do not have any legislative or rating powers. They function on the basis of powers delegated by the MMDAs. Metropolitan Assemblies are divided into Sub-metropolitan District Councils, which consist of all elected members of the Assembly in that sub-metropolitan district and such other persons resident in the sub-metropolitan district appointed by the president. The other sub-district structures are the Urban/Zonal/Town/Area Councils, with the given name depending on the size and nature of the settlement (see Table 4.2); and Unit Committees.

Legislative Instrument, LI 1589, passed in 1994 established the Urban, Zonal, Town and Area Councils and Unit Committees. The LI was amended by LI 1726 of 2003. The Urban/Zonal/Town/Area Councils are composed of representatives from institutions

above and below, five from the MMDAs and ten from Unit Committees in the area and five other persons appointed by the DCE on behalf of the president. Members are, thus, not elected. The Urban/Zonal/Town/Area Councils serve as the implementing agencies of the MMDAs; they are described as the “rallying point of local enthusiasm in support of the development objectives of the District Assemblies” (Ayee, 2000: 17, quoted in Crawford, 2004a: 13). They constitute the base of both the decentralisation and local government system.

The Unit Committees consist of ten elected persons ordinarily resident in the Unit and five other persons nominated by the DCE on behalf of the president. The Unit Committees being in close contact with the people perform roles such as public education campaigns, ensuring environmental cleanliness, organisation of communal labour and revenue raising among others. The Unit Committees are also implementing agencies of the MMDAs. The Urban/Zonal/Town/Area Councils and the Unit Committees have been designed to enhance and extend citizen participation in the local political process. The first elections to Unit Committees were conducted in 1998.

The MMDAs have a mixed type of decentralised authority - they form part of a single integrated hierarchy of government administration from local to national levels. Each Assembly is required to incorporate under one authority the decentralised sectoral departments and agencies that the law (Local Government Act 462, 1993) deconcentrated to district levels. They therefore combine the role of traditional district administration, responsible to central government, with democratic control, service provision and tax-raising powers of devolved local government. Decentralisation alone is not enough; therefore, stakeholder participation is needed to improve the democratic content of the reform (Gough et al., 2003; Kujinga, 2002; see 2.4.2). Stakeholder participation envisages development planning to be directly or indirectly in the hands of the local people (beneficiaries of development).

#### 4.2.4 Decentralised Participatory Development Planning Policy

The National Development Planning Commission (NDPC), established by Act 479 (1994) is the national coordinating body of the decentralised national development planning system. Before the establishment of the NDPC and before the 1992 Constitution, a Planning Commission was established with the President as chairperson. It was a highly centralised institutional arrangement, with very little or no room for popular participation. The minister responsible for planning served as vice-chairperson. Local level concerns could not be adequately catered for in the annual plans since there was no representation from the regions and as such, the planning commission was not representative of the people (Kokor et al., 2008). Some of the priorities of central government were not priorities of the citizens at the local level, as decisions were not taken at the local level.<sup>9</sup>

The framers of the 1992 Constitution were partly informed by these lessons and introduced the principle of spatially decentralised and coordinated development planning. In 1994, a decentralised development planning system was instituted with NDPC at the apex (Kokor et al., 2008). Participation is seen as a major innovation in the national

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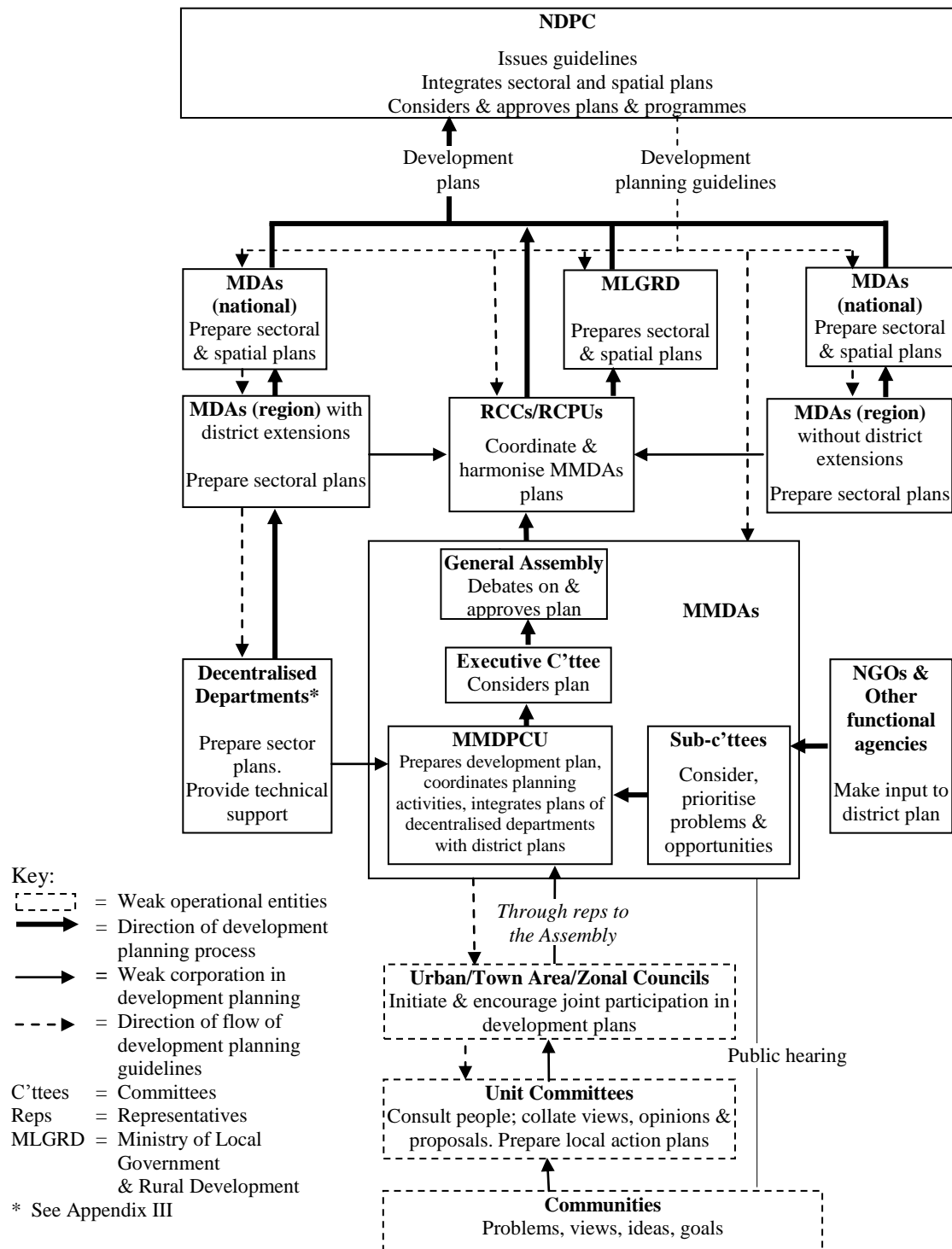
<sup>9</sup> Interviews 10 (2009), 82, 87, 90 (2010).

development planning process. The National Development Planning (System) Act 480, 1994 aims at ensuring grassroots participation in the national development planning process by making provisions for citizens to make inputs into the national plan at the local level through their representatives at the Unit Committees and the District Assemblies (section 3 of National Development Planning (System) Act 480, 1994).

The governance structure and planning authorities provide the channels through which decentralised development planning functions are coordinated and managed to achieve national development objectives (Kokor et al., 2008). The decentralised national development planning system consists of four planning entities that are institutions or agencies in the public sector. These planning entities and their roles and responsibilities, relationships, planning and management processes and outputs are specified in the National Development Planning System Act, 1994 (Act 480). These planning entities are: (a) the MMDAs and Metropolitan, Municipal, District Planning Coordinating Units (MMDPCUs) at the district or local level; (b) the RCCs and Regional Planning Coordinating Units (RPCUs) at the regional level; (c) the Ministries, Departments and Agencies (MDAs); and (d) the NDPC at the national level (Section 1 (2) of National Development Planning System Act 480, 1994). The planning functions of RCCs and their RPCUs are spelt out in the National Development Planning System Act 480, 1994, Sections 8 and 9.

Both the local government and the planning laws emphasise the district as the focal point for centering development planning and budgeting activities at the local level. The responsibility of sub-national development planning is vested in the MMDAs acting through their planning coordinating units (MMDPCUs). To facilitate the planning tasks of the MMDAs, the MMDPCUs were established under Section 46 (3) of the Local Government Act 462, 1993. The functions of MMDPCUs specified under Section 7 of the National Development Planning (System) Act 480, 1994 include coordinating the planning activities of sectoral/decentralised departments and other appropriate agencies connected with the development planning process in the area. The responsibility of these departments encompass economic production activities, social services provision, technical infrastructure development and environmental management (see Figure 4.1, which shows stakeholders' involvement in Ghana's decentralised development planning processes).

The functions of MMDAs as planning authorities at the local levels are stated in Section 10 (3)-(5) and Section 12 (1) of the Local Government Act 462, 1993. The functions are also spelt out in Section 2 of the National Development Planning System Act 480, 1994 to cover planning for the overall development of their areas of jurisdiction, including, social, political, economic, environmental and spatial dimensions as well as human settlements, with *full participation of the respective local communities and groups*. They are to ensure that sector and spatial policies, plans, programmes and projects in their areas of jurisdiction are integrated and also compatible with national development objectives and guidelines issued by the NDPC. With financial backing, through the District Assemblies Common Fund (DACF) they are required by the law to ensure the preparation and submission to government through the RCCs of their development plans and budgets for consideration, approval and implementation (Act 480 and 462).



**Figure 4.1 Stakeholder Involvement in Decentralised Development Planning Process**

Source: Based on National Development Planning (System) Act 480, 1994; Local Government Act 462, 1993; interviews 10, 28 (2009), 86, 89 (2010).

Provisions are made in Section 3 of Act 480 to have communities participating in the formulation of district plans. Section 3 (1) of Act 480, 1994 requires the MMDPCUs to conduct a public hearing on any proposed district development plan and consider the

views expressed at the hearing before the adoption of the proposed district development plan. This would ensure transparency and accountability in the development planning process. Sub-district or local action plans are also required by the same law to have public hearing before adoption. Section 4 (1) of Act 480, 1994 requires that a written report on the public hearings, including written submissions by individuals, groups, committees and organisations be attached to the proposed development plan before submission. This would ensure incorporation of community interests and ownership in the development plans. Local communities in the districts can be authorised by the MMDPCU to prepare a sub-district or local action plans. These are required to be compatible with the approved district plan; follow the development guidelines of the MMDPCU as well as guidelines, which may be prescribed by the NDPC.

The NDPC coordinates sectoral planning of the sector MDAs at the centre of government, as well as spatial planning of the MMDAs. It issues guidelines for the development plans of the MDAs and MMDAs. These functions and other functions are spelt out in Section 11 of the National Development Planning (System) Act 480, 1994.

In agreement with the national policy of decentralisation, the National Development Planning (System) Act 480, 1994 stresses participatory planning processes. The planning process begins with the issuance of guidelines by the NDPC to the MMDA Planning Authorities at the local level, RCCs at the regional level and the MDAs at the national level. Among others, the NDPC guidelines define areas of national policy priorities and strategies. The guidelines also provide the framework for the derivation of sector, regional and district goals, objectives, and strategies; define the scope of sector and MMDA plans; and prescribe the format for the preparation of these plans (Section 11 of the National Development Planning (System) Act 480, 1994). Figure 4.1 shows stakeholders' involvement in the decentralised development planning process.

Though Ghana has decentralised her development planning the approach is a mixture of top-down and bottom-up approaches. As discussed above certain directives and initiatives are taken at the centre. Inputs for planning flow in two directions: 'top-down' with inputs from NDPC; and 'bottom-up' with plans, views and ideas from lower levels of governance (Unit Committees and Zonal/Urban/Town/Area Councils through the Assembly person of the area) (see Figure 4.1 above).

In theory, the bottom-up planning starts with communities' problems, goals and objectives in the form of development priorities from Unit Committee level through Town/Area/Urban/Zonal Councils to the MMDPCUs. The sub-committees of the MMDAs consider the problems and opportunities, define, prioritise and submit these to the executive committee of the MMDAs (Kokor et al., 2008). The decentralised sector departments provide technical support at sub-committee meetings on the plans. In reality the departments of the MMDAs, NGOs and other functional agencies deliberate and collaborate with one another and get out the rudiments of the district plan.<sup>10</sup>

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<sup>10</sup> Interviews 28, 35 (2009), 92 (2010).

The MMDPCU coordinates and integrates the district sectoral plans into the district development plans (medium- and short-term plans) and budget for consideration by the executive committee and debate and approval by the general assembly of the MMDA. The approved plan from each MMDA in a region is then submitted to the RCC. The RCC then coordinates and harmonises the plans from the different MMDAs and submits the plans to NDPC and copy to Ministry of local Government and Rural Development.<sup>11</sup> This approach deviates from the previous uni-sectoral and compartmentalised approach before decentralisation.

### **4.3 Assessment of Decentralisation Policy within the Context of Stakeholder Participation**

The decentralisation objective to empower local communities to be active participants at all levels of administration and delivery of development that provides societal needs for improvement of life is liberally catered for by Local Government Act 462, 1993 and National Development Planning (system) Act 480. The laws empower and increase the capacity of local communities to identify their own needs. The laws provide mechanisms through which citizens have the possibility to express their views such as voting during local elections every four years.<sup>12</sup> Section 9 of the Local Government Act 462, 1993 confers on the electorate the power to recall their elected representatives. This is expected to enhance accountability on the part of the elected representatives.

The 1992 Constitution requires the transfer of functions, powers, responsibilities and resources to local governments (see Article 240 Section 2 (a)). The laws are designed to ensure participation by the people that decisions affect most directly. In addition the Constitution requires that people in a particular local government areas, as far as practicable be given the opportunity to participate in their governance to ensure accountability. In line with this, a person is qualified to be elected or appointed if he/she is ordinarily resident in the district in which he/she seeks election.

The local government policies provide for consultation of the people by their representatives in the District Assemblies (assembly members). The laws also demand accountability of assembly members to their electorate. The Local Government Act 462, 1993, Section 16 (1) requires an assembly member to maintain close contact with his/her electoral area; consult his/her people on issues to be discussed in the District Assembly and collate their views, opinions and proposals. It as well requires him/her to present the people's views, opinions and proposals to the District Assembly; and report to them the decisions of the Assembly, and actions he/she has taken to solve problems raised by the electorates.

Though the majority of members of the District Assemblies and its sub-structures are elected from within the local communities, representation is not fully democratic. In spite of 30 percent of the DA members being appointed in consultation with civil society and traditional authorities in the district such persons can only be removed with the consent of the President if they err (Section 9 (6) of the Local Government Act 462, 1993).

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<sup>11</sup> Interviews 10, 28, 31 (2009), 89, 90 (2010).

<sup>12</sup> See Section 5 (3) of the Local Government Act 462, 1993.



The appointment of the DCE by the President creates a situation that tends to undermine downward accountability of the local government system (Eckardt, 2008) which has been established as one of the strengths of decentralisation (see 2.4.3). Competence is also sometimes compromised in the selection of the DCE and other appointees in favour of political party affiliation.<sup>13</sup> Legally the DCE represents the President in a district. The DCE tends to respond more to central government requests than local demands. As such, political support for implementation of local plans is not reliable.<sup>14</sup> The superimposition of a partisan central government on a non-partisan local government by the 1992 Constitution affects the selection of appointees by the central government (Zanu, 1996). The situation where the Member of Parliament is a non-voting member of the District Assembly and the DCE is a voting member of the District Assembly (refer to 4.3.3) creates an undefined relationship between them. Conflict can, and does, develop in a situation where they are affiliated with different parties.<sup>15</sup>

With the decentralisation policy and development planning at the lowest levels of government, it is expected that local government, the District Assemblies, will have control over development policy planning over their areas of jurisdiction. The DAs are expected, through the assembly members, Area Council members and Unit Committee members, to engage people in dialogue to determine development goals (see Figure 4.1 above). However, development planning and budgetary decisions hinge on governmental approval (National Development Planning (System) Act 480, 1994). Many legal directives from the centre limit the ability of the District Assemblies to initiate policy and their independence of action outside the framework of national programmes.<sup>16</sup> What if the plans that are prepared based on the needs, priorities or desires of local communities are not compatible with national development objectives and guidelines issued by the NDPC? Will those plans be dropped? The answers obtained to these questions are that the national objectives encompass a wide range of development issues so in most cases there is an objective under which a local plan fits.<sup>17</sup>

Stakeholder participation in development planning at lower levels of governance is expected to result in plans that meet societal needs for improvement of life. However, the requirements of the District Assemblies Common Fund (DACF) also constrain the District Assemblies on how to invest the funds. The District Assemblies are not enabled to invest the funds in the most priority needs of their people.<sup>18</sup> There are requirements on proportions of the funds that have to be used for certain activities. For instance under the 2009 guidelines formulated by the Minister of Local Government (empowered to do so by Section 9 of the District Assemblies Common Fund Act 455, 1993) about 50 percent of the Common Fund must be expended on certain activities (see Table 4.3). This leaves about only 50 percent of the Common Fund for the DAs to control. Nevertheless, the

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<sup>13</sup> Interviews 10, 29, 32 (2009).

<sup>14</sup> Interviews 28, 32, 35 (2009).

<sup>15</sup> Interviews 29, 31 (2009).

<sup>16</sup> Interviews 28, 31, 35 (2009).

<sup>17</sup> Interviews 31, 35 (2009), 90, 92 (2010).

<sup>18</sup> Interviews 29, 55 (2009), 89 (2010).

creation of the Common Fund shows a degree of fiscal decentralisation but the significant proportion of appointed (unelected) DA members reduces democratic control. With regard to the above discussions, the intensity of participation of the DAs is at the level of partnership on the participation ladder since they are not in full control in deciding which activities to utilise the common Fund (refer to 2.5.7).

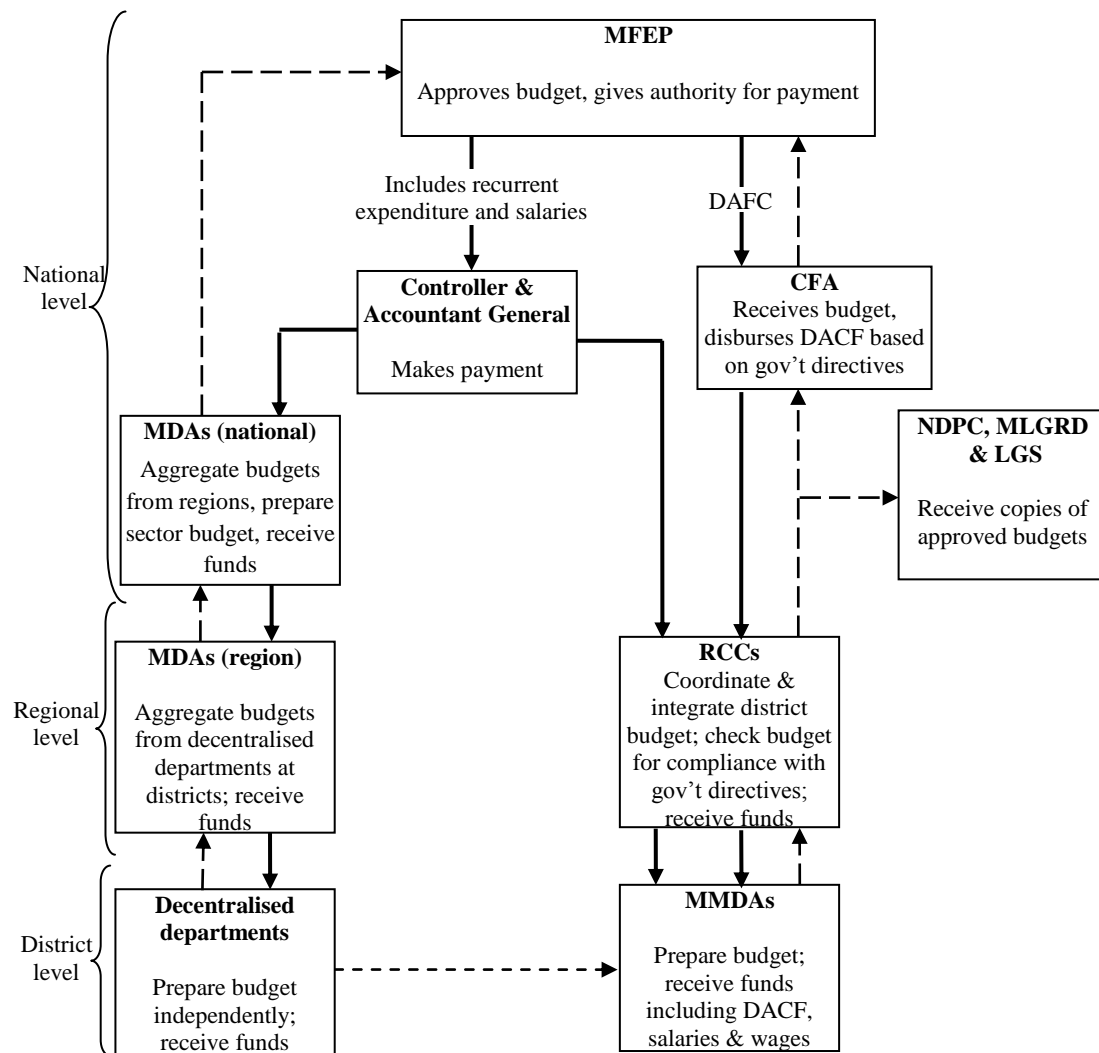
**Table 4.3 Utilisation of DACF 2009**

<b>Reserved Fund (15% of total common fund)</b>	
<b>Activity</b>	<b>% DACF</b>
MP's Constituency Common Fund	6.0
Regional Coordinating Councils (for monitoring, coordination and evaluation)	1.5
Ministry of Local Government, Rural Development and Environment	2.0
Office of the District Assemblies Common Fund Administrator (for monitoring and evaluation)	0.5
District development facility & sanitation programmes	5.0
<b>Total</b>	<b>15.0</b>
<b>Tied Grant (33.15% of total common fund)</b>	
<b>Activity</b>	<b>% of the remaining 85% of DACF</b>
Human Capacity Building	1.0
National Youth Employment Programme	35.0
District Response Initiative on HIV/AIDS	0.5
Malaria Prevention	0.5
People with Disabilities	2.0
<b>Total</b>	<b>39 (33.15% of total common fund)</b>
<b>Areas indicated for the use of the remaining 51.85%</b>	
<b>Areas</b>	<b>Sectors</b>
Economic Ventures	Energy, markets, industry, agricultural services, roads, streets, bridges and culverts, ICT, private sector support & counterpart funding.
Social Services	Education, health, electrification, water supply, housing, sports, recreation & community self-help projects.
Administration	Human resource management, accommodation, office facilities and equipment, project management & governance structures.
Environment	Sanitation, drainage systems, waste management & environment protection.

Source: Based on Republic of Ghana (2009).

Local government accountability tends to be upward oriented because of the effect of strong financial dependence on central government funds and political loyalty towards the centre (see Figures 4.2 and 4.3). The sub-national governments are less accountable to their citizens regarding financial transparency, control and information to the citizens;

setting priorities and expenditures in infrastructure and service provision; and staffing and organisational development and management.<sup>19</sup>



**Figure 4.2 Spending Flow and Budgeting Process**

Key:

CFA = Common Fund Administrator  
 DAFC = District Assembly Common Fund  
 Gov't = Government  
 LGS = Local Government Services  
 MDAs = Sector Ministries, Departments & Agencies  
 MFEP = Ministry of Finance & Economic Planning  
 MLGRD = Ministry of Local Government & Rural Development

MMDAs = Metropolitan, Municipal & District Assemblies  
 NDPC = National Development Planning Commission  
 RCC = Regional Coordinating Council

→ = Spending flow  
 ---> = Direction of budget flow  
 .....> = Weak direction of budget flow

Source: Based on interviews 6, 7, 10, 28, 31 (2009), 90 (2010).

<sup>19</sup> Interviews 29, 76 (2009) FGD 6, 7 (2009).

The District Assemblies lack human resources for technical support in the form of professional planning officers and there is also inadequate funding. Poor quality of staff at the district level reduces effectiveness of the assemblies in planning. The main source of funding (excluding donations), the DAFC, apart from being inadequate is also not regular. The inadequate funding and delays of the DAFCF constrain the DAs in the types of development projects that can be supported. There is also inadequate reliable data for effective planning.<sup>20</sup> Poor human capacity intensified by the reluctance of formerly deconcentrated officials to work for local government hamper the performance of the Districts Assemblies.

The sub-district structures are established to enhance and extend the scope of citizen participation in the democratic process. However, few people put themselves forward as candidates in the elections. Some Unit Committees in the Suhum-Krabo-Coaltar District, therefore, do not have the full complement of elected members.<sup>21</sup> Participation below the District Assembly level has not been operationalised yet as many of the Area Councils and Unit Committees are not functioning, they are even absent in some areas such as in the East Akim District.<sup>22</sup> Most of the Zonal and Area Councils do not have offices in the New Juaben Municipal.<sup>23</sup> Therefore the sub-district or local action plans are not prepared. This leaves a large gap in development decision-making between the District Assemblies and the communities and decision-making tends to be centralised in the District Assemblies.<sup>24</sup> These make participation of stakeholders at the sub-district level not intensive; it is at the level of tokenism on the participation ladder (refer to subsection 2.5.7). The district development plans, which are debated on and approved at the Assemblies, therefore do not have inputs from the local people. The non-functioning of the sub-district structures promotes elitism; the DCEs and other government appointees capture the plans.<sup>25</sup>

The unwillingness of the centralised departments to let go their control over the local level structures creates a problem. This is partly, as a result of the incomplete nature of the decentralisation process, especially, the slow progress in fiscal decentralisation. There is still a growing concentration of power and resources in key sector ministries and departments, that plan, implement, monitor and evaluate essential services to communities in the districts.<sup>26</sup> There is the problem of lingering allegiance of staff at decentralised departments in the districts to their regional and national headquarters (see Figure 4.3 below). This is partly due to the incentives of career progression and receipt of funds for recurrent expenditure from the centre. Recruitment of personnel to the decentralised departments and payment of salaries are done from the national headquarters (see Figure 4.2 above). No provision is made in the new legislations (Local Government Service Act 656, 2003) as at which level the recruitment of personnel to the

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<sup>20</sup> Interviews 10, 28, 31 (2009), 90 (2010).

<sup>21</sup> Interview 28 (2009), FGD 21 (2010).

<sup>22</sup> Interviews 35, 55 (2009).

<sup>23</sup> Interviews 10 (2009), 90 (2010).

<sup>24</sup> Interviews 55, 76 (2009), 87 (2010).

<sup>25</sup> Interviews 55, 76 (2009), 92 (2010).

<sup>26</sup> Interviews 7, 10, 32 (2009), 92 (2010).

decentralised departments and payment of salaries are to be done. They are as such done at the national headquarters.<sup>27</sup>

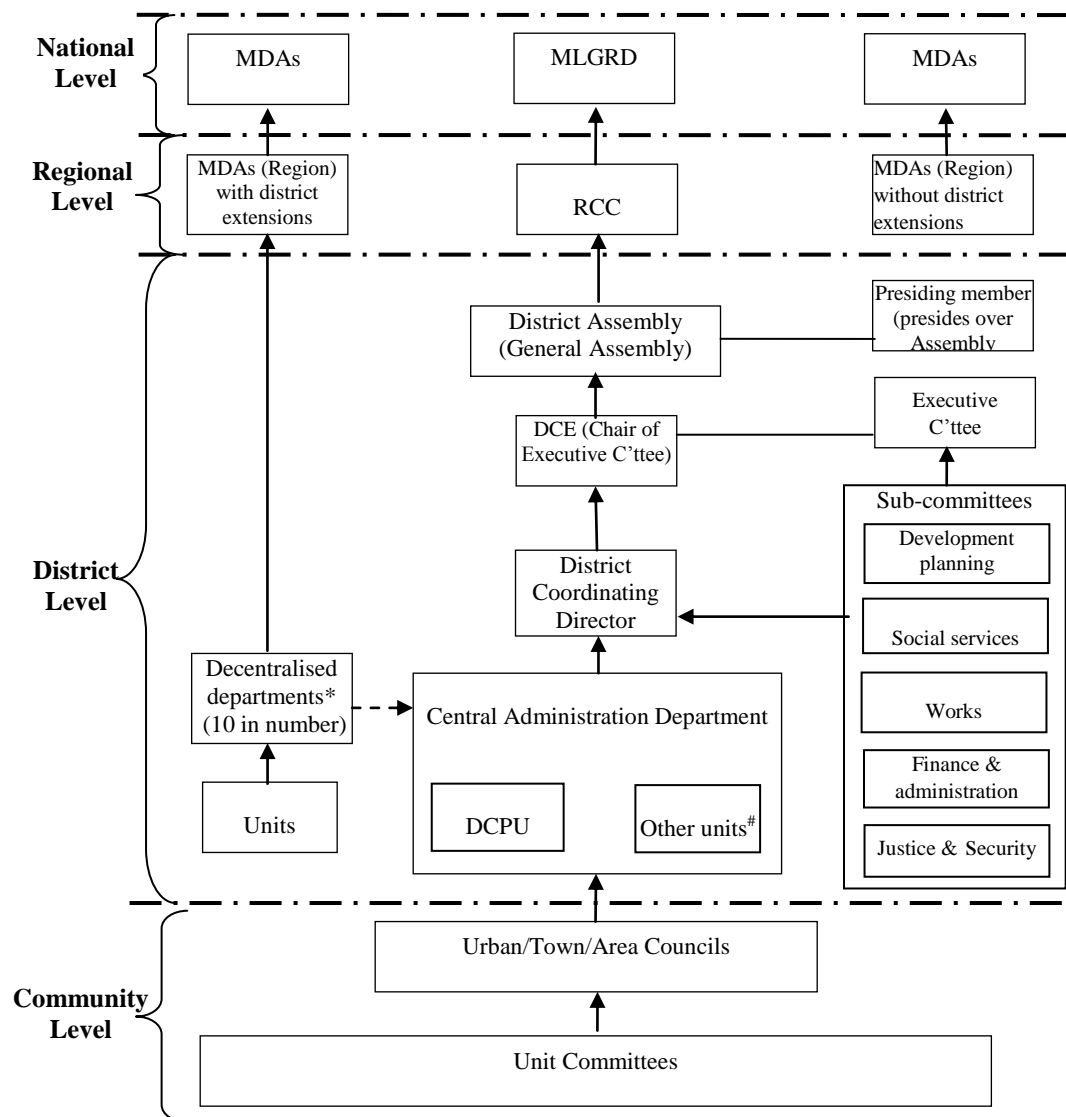


Figure 4.3 Reporting Lines from Local Level to National Level

Key:

→ = Direction of reporting

- - - → = Weak reporting line

- - - = Governance level boundary

C'ttee = Committee

MDAs = Sector ministries, departments and agencies

MLGRD = Ministry of Local Government & Rural Development

RCC = Regional Coordinating Council

DPCU = District Planning Coordinating Unit

# Other units within the Central Administration Department are: General Administration Unit, Budgeting Unit, Statistical Services, Information Services, and Births & Deaths Registry

\* See Appendix III

Source: Based on Ministry of Local Government and Rural Development (1996); Local Government Act 462, 1993; interviews 10, 28, 32 (2009), 92 (2010).

<sup>27</sup> Interviews 10, 31, 35 (2009).

Some decentralised departments such as the health department operate in isolation instead of integrating with the District Assemblies. They refuse to acknowledge the authority of the District Assemblies over them. This is partly due to the reluctance of the national and regional civil officers to accept the redefinition of their roles; the relationships between the district heads and the District Chief Executives in terms of the new set up; and their failure to let their officers work for the District Chief Executives. Some central authorities hold on to funds and control programmes in the districts without the knowledge of the District Assemblies. These were indicated by the interviews.<sup>28</sup>

This section has demonstrated that aspects of deconcentration and devolution decentralisation are evident in Ghana, though the degree of devolution is limited and decentralisation is incomplete. The District Assemblies lack technical support such as the required human capacities as well as limited funds to carry out their numerous functions.

#### **4.4 The Link between Ghana's Decentralisation Policy and Water Policy**

Detailed discussion on Ghana's Water Policy is undertaken in Chapter 5. Ghana has adopted the IWRM principle in managing its water resources and within the general decentralisation of development programmes has been emphasising stakeholder participation (see Agyenim, 2011). In response to the decentralisation policy of the 1990s, the Ghana water sector reform emphasised decentralisation and stakeholder participation for more sustainable management especially in the water supply sector. The urban water supply sub-sector embarked on a Public-Private Partnership and the rural water supply sub-sector has embarked on community participation in the operation and maintenance of water facilities and decision-making. The water policy encourages private sector participation in the provision of goods and services in the water sector (see Chapter 7).

The key guiding principles for sustainable management, development and use of water in the Ghana water policy are in line with the decentralisation policy. One of the principles of the water policy is subsidiarity in order to ensure participatory decision-making at the lowest appropriate level in society (MWRWH, 2007). There is the objective of ensuring the participation of all stakeholders, including the private sector, local communities, particularly women, in decision-making on water-related issues. The water policy is also guided by the principle of adopting the river basin (or sub-basin) as a planning unit. This principle implies decentralising water resources management to the river basin level and allowing for stakeholder participation in water resources management at local levels. These are linked to the decentralisation policy of ensuring that functions, powers, responsibilities and resources are at all times transferred from the central government to lower levels of governance as stated in the 1992 Constitution Article 240, Section 2 (a).

The National Water Policy requires the strengthening of District Assemblies to assume a central role in supporting community operation and the maintenance of small-scale irrigation. The District Assembly is also expected to maintain food production facilities and manage water and sanitation facilities, as well as to maintain the integrity of aquatic ecosystems. This is in line with Section 10 (4) (b) of the Local Government Act 462, 1993 which requires the District Assemblies to guide, encourage and support public

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<sup>28</sup> Interviews 7, 28, 32 (2009), 90, 92 (2010).

agencies and local communities to perform their roles in the execution of approved development plans.

With regard to water resources management in the area of protection and conservation through the use of cleaner and efficient technologies, effective waste management and sound land management and agricultural practices, the water policy proposes partnerships between the public and private sectors; and joint participation with other persons or bodies as some of the measures. These relate to sections of the Local Government Act 462, 1993 (Section 10 (4) (c) and Section 10 (6) (b)). Section 10 (4) (d) of the Local Government Act 462, 1993 promotes private sector participation in undertaking projects under approved development plans. Similarly, the water policy encourages actions to expand the private sector's role and participation in diverse ways. These are: (a) identification and implementation of water resources development projects; (b) investment and management of urban water supply as a means of mobilising investment and improving overall efficiency; and (c) the provision of water supply and sanitation services for improved management and to facilitate capital inflows.

The water policy aims at ensuring sustainability through effective community ownership and management of facilities, active participation, public sector facilitation and private sector provision of goods and services under community water supply. The District Assembly concept in the decentralisation policy, with respect to community participation, also provides the enabling environment for community participation in water delivery. The rural water delivery system has adopted the strategy of training of community leaders, community members and district officers to improve attitudes towards community ownership, operation and maintenance of community water facilities.

The decentralisation process has the objective of empowering communities to be able to participate effectively in the decision-making processes that relate to the overall management and development of the districts. The process increases power and capacity of local communities to identify their own needs. Act 480 Section 3 (1) also makes provision for allowing communities to express their views and make inputs to development plans. Related to these the water policy on rural community water supply requires communities to express demand by participating in making informed decisions on choices of services that fit their needs.

#### **4.5 Inferences**

The chapter has demonstrated that the decentralisation in governance has been operational in the Ghanaian economy since 1988. This has been influenced by the development thinking of the period. The legal regimes that established and shaped the decentralisation system include the Local Government Law (PNDC Law 207) 1988, the 1992 Constitution, the Local Government Act 462, 1993; the National Development Planning Commission Act 479, 1994; and the National Development Planning (System) Act 480, 1994.

There is no distinct law on stakeholder participation in Ghana; rather policy on stakeholder participation at the local level is inherent in the laws governing decentralised development planning and laws about local government where the District Assemblies are the principal actors. Stakeholder participation is interpreted in the laws as

incorporation of the interests of the public in development planning through their representatives at the District Assemblies. Participation is incorporated in the decentralisation policy to empower local communities to be active participants in administration and the delivery of development that provides societal needs for improvement of life; and to give local people the opportunity to participate effectively in their governance to ensure accountability through their representatives.

There are challenges with the decentralisation system: first, is the democratic deficit - the appointment of 30 percent of District Assembly members and the District Chief Executive (DCE) by the central government encourages upward accountability and less of downward accountability to the local electorate. Second is incomplete decentralisation, which is demonstrated in four ways. First, financially and career wise the decentralised departments are dependent on the centre. This has created problems of disloyalty to the District Assemblies by the decentralised departments. The second is that development planning and budgetary decisions hinge on governmental approval. Third, the requirements of the District Assemblies Common Fund (DACF) constrain the District Assemblies on how to invest the funds. Last, participation of stakeholders at the sub-district level in development planning is not intensive; it is at the level of tokenism on the participation ladder. Many of the sub-district structures are not functioning and most of the Zonal and Area Councils do not have offices.

Stakeholder participation in the water sector at all levels including the national level is embodied in the national water policy and other laws in the water sector. The next chapter, therefore, discusses the Ghana National Water Policy and the role of stakeholder participation in the water policy.



## 5 Water Policy in Ghana

### 5.1 Introduction

Water is a resource with multiple uses and it is of paramount importance. Its availability is important for human existence and ecological life. However managing it for its multiple uses has been of great challenge to many nations. It requires a comprehensive policy for its development and management. Developing a comprehensive water policy has not been without challenges for several nations. Ghana did not have a comprehensive water policy until 2007. What existed were different laws and policies in fragments from the various sub-sectors. The current discourse about effective water resources management admits stakeholder participation as a prerequisite (Carmona et al., 2011; Von Korff et al., 2010; Özerol and Newig, 2008; Mouratiadou and Moran, 2007). The present chapter examines the water policy and stakeholder participation in Ghana to find answers to the following questions: Why and how did Ghana develop its water policy? How did stakeholders influence the formulation of the water policy? How adequate is the policy in providing for stakeholder participation for effective management and development of water resources?

These are accomplished through examining the content of the water policy documents and interviews with key informants. The chapter first discusses the water situation (Section 5.2) and challenges (Section 5.3) in Ghana before examining the water laws (Section 5.4). The next section (5.5) examines stakeholder participation in the development of the Ghana water policy. It ends with inferences made from the chapter (5.6).

### 5.2 The Water Situation in Ghana

#### 5.2.1 Freshwater Availability

Surface water and groundwater constitute the two main sources of water in Ghana. These are utilised for domestic water supply, agriculture, industrial production, hydroelectric power generation, transportation, recreation, and mining activities. The surface sources are grouped into three main river systems. First, the Volta system, which comprises the Red, Black and White Volta Rivers and the Oti River, is shared with Cote d'Ivoire, Burkina Faso, Togo, Benin and Mali. Second, the south-western system consists of the Bia, Tano, Ankobra and Pra Rivers. The Bia Basin is shared with Cote d'Ivoire; while the lower reaches of Tano River form part of the boundary with Cote d'Ivoire. Third, the coastal river system is made up of the Tordzie/Aka, Densu, Ayensu, Ochi-Nakwa and Ochi-Amissah. The Volta system forms 70 percent of Ghana's total land area; the south-western river system makes up 22 percent and the coastal river system drain the remaining eight percent of the land area of Ghana (WWAP, 2012; WRC, 2008a).

There also exists one significant natural freshwater lake situated in the forest zone. This is Lake Bosomtwi; it has a surface area of 50 km<sup>2</sup> and a depth of 78 m (WWAP, 2012; MWRWH, 2007). The mean annual runoff from the three river systems in Ghana is 40

billion m<sup>3</sup> with wide variations between the dry and wet season flows.<sup>29</sup> The surface water sources provide 39.4 billion m<sup>3</sup> per annum of freshwater (MWRWH, 2007).

Groundwater resources are mainly in aquifer, which are recharged by direct infiltration of precipitation. Groundwater is found to be more reliable compared to surface water as it is available throughout the year even during periods of drought. Most often there is no need for treatment as it is less polluted. Springs and wells are relatively inexpensive and provide good sources of drinking water. However, aquifers along the coastal zone are shallow with saline intrusions. Consequently, water from most of the boreholes drilled is salty. There are high iron and fluoride contents in the underground water in some parts of the country including the Upper East region. In the Upper West, Upper East, Northern and parts of Brong Ahafo regions borehole yield is minimal with instances of “dry boreholes” (WRC, 2011a; MWRWH, 2007).

One other source of freshwater is rainwater. There is spatial variability in the annual rainfall. It generally decreases from 2,000mm per year in the south-west to 1,000mm per year in the north and 800mm per year in the south east of the country (WWAP, 2012). There is as well, temporal variability in the amount of available water within the year. In the White Volta basin, for instance, the mean dry season flow is about six percent of the mean wet season flow and 11 percent of the annual flow. In the past three decades, there has been reduction of 20 percent and 30 percent in rainfall and stream flows respectively due to climate change (UN, 2004). Per capita water availability in 1998 was 3,000 m<sup>3</sup> per annum (MWH, 1998a) and the estimate for 2025 is 1,464 m<sup>3</sup> per annum (WRC, 2008a).

### 5.2.2 Water Demand

The main consumptive uses of water in Ghana are potable water supply, irrigation and livestock watering. The total annual freshwater withdrawal in 2009 was 0.98 billion m<sup>3</sup>. Withdrawal for agricultural purposes (irrigation and livestock watering) formed 66.4 percent. Domestic withdrawals formed 23.9 percent whilst withdrawal for industrial purposes formed 9.6 percent of total withdrawal (Indexmundi, 2012). The consumptive water demand for surface water resources alone has been projected to be 5 billion m<sup>3</sup> in 2020 (Ghana Integrity Initiative, 2011). There is apparently more than adequate water for the projected demand but current coverage shows that demand has not been met and there are deficits in supply (see subsection 5.2.3).

The main non-consumptive uses are inland fisheries, water transport and hydroelectric power generation. There are two hydroelectric dams constructed on the Volta River. The large one, located at Akosombo has created an artificial lake covering about 8,500 km<sup>2</sup> at full supply level of 88.5 metres. The smaller impoundment covers about 40 km<sup>2</sup> and was created at Kpong 20 km downstream of Akosombo. There is a third hydropower project under construction, the Bui project, on the Black Volta (WRC, 2011a). It was expected to be completed before year 2012 ended. The projected demand for hydropower generation in 2020 is 0.378,430 million m<sup>3</sup> which is less than 22 percent of the projected supply (Ghana Integrity Initiative, 2011). Other major impoundments are the Weija and Owabi

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<sup>29</sup> Runoff is the portion of rainfall that runs into streams as surface water rather than being absorbed by the soil.

Reservoirs on Densu and Offin Rivers, respectively. River navigation is undertaken on a 415 km stretch on the Volta Lake from Akosombo to Buie (WRC, 2011a).

### 5.2.3 Water Supply

The Ghana Water Company Limited (GWCL) is the agency in charge of urban water supply. It operates 83 urban systems with an average daily output of 682,160 m<sup>3</sup> as against a daily demand of 1,076,526m<sup>3</sup> (GWCL, 2012b). Water is rationed to many consumers with only a few consumers able to get 24-hour supply a day. In the peri-urban areas and the densely populated poor urban areas, it is not uncommon for customers to receive no water at all for a week or once a week. This is supplemented by the private water tanker service systems.<sup>30</sup> Nationally, 37.8 percent of urban dwellers have piped water in their homes and 28.1 percent rely on neighbours and vendors for their water needs (Ghana Statistical Service, 2008).

Rural water, small town and bottled water producers depend mostly on groundwater sources. In rural water supply, hand pumps are fitted to boreholes after the boreholes have been constructed and developed. Water is then pumped out manually from the ground. For small town water supply, the boreholes are mechanised and water is pumped out automatically by electric pumps from the boreholes through service lines to a water storage tank. Water is then delivered from the storage tanks to houses and public stand-pipes. Bottled water supply is similar to the small town water supply except that the water is delivered for commercial purposes (WRC, 2008a). Table 5.1 shows the national water supply coverage from 2004 to 2011.

**Table 5.1 National Water Supply Coverage 2004-2011 (%)**

Category of population	2004	2006	2008	2009	2011
Urban	55.00	Not available	58.00	Not available	63.37
Rural & small town	51.10	52.86	57.27	63.13	Not available
Total	53.05		58.14		

Source: Based on data from GWCL (2012b); AMCOW (2011); CWSA (2011a); CWSA (2010); MWRWH/CWSA (2008); MWRWH (2007).

The national coverage for urban water supply increased from an estimated rate of 55 percent in 2004 (MWRWH, 2007) to 58 percent in 2008 (AMCOW, 2011) and 63.37 percent in 2011 (GWCL, 2012b). Rural water supply coverage<sup>31</sup> increased from 51.1 percent in 2004 (MWRWH/CWSA, 2008) to 57.27 percent in 2008 (CWSA, 2010) and 63.13 percent in 2009 (CWSA, 2010) (see Table 5.1). The table shows shortages in water

<sup>30</sup> Interview 42 (2009).

<sup>31</sup> Water coverage means: water facility provides all year round potable water to community members; each person has access to a minimum of 20 litres of water per day; and the maximum walking distance to a water facility is equal to or less than 500 metres (CWSA, 2007).

coverage. As discussed earlier (see 5.2.2) though there is more than adequate water for the projected demand in 2020 there are shortages in supply coverage. In 2011, urban water supply had a shortage of 36.63 percent whilst rural water, in 2009 had a shortage of 36.87 percent. This demonstrates the water supply challenges that confront the country.

### 5.3 Water Challenges in Ghana

Although water resources in Ghana seem abundant, supply is limited (see 5.2.3). One challenge in the water supply sector is meeting increasing demand in the face of limited funding for the sector. In the urban water supply sector, most of the water supply systems were built over 30 years ago; and therefore yields from supply sources are thus no longer able to meet current demand. Rehabilitation of the systems, expansion of supply and construction of new supplies are needed.

There is the difficulty associated with setting of tariffs to cover costs in view of the high levels of wastage (physical losses) (GWCL, 2006). The existing piped water supply systems suffer from high rates of unaccounted for water through physical and financial losses caused by water produced but not paid for. As of 2008, it was estimated that up to 40 percent of water produced was unaccounted for (Asamoah et al., 2008).

The challenge of making the urban water supply sector sensitive to the poor is documented (Agyenim, 2011; MWRWH, 2007). There is the dilemma between increasing tariffs to recover costs fully and paying attention to affordability, particularly by the poor. The latter affects the achievement of equity in access to water supply for peri-urban and urban poor to meet their basic needs at affordable costs (MWRWH, 2007).<sup>32</sup>

The second set of challenges is connected with water for agricultural and energy production. The first of this set relates to ensuring availability of water in sufficient quantity and quality for food-crop production, watering of livestock and sustainable freshwater fisheries to achieve sustainable food security for all seasons. The second is identified with making water available in suitable quantities for energy production and other non-consumptive uses. The other concerns the preservation and restoration of natural character and functions of ecosystems (WRC, 2010).<sup>33</sup>

Challenges in managing demand for competing uses of water in making allocation-decisions are also of great concern as demand expands with population growth. These include:

- The need to balance food supplies with that of preserving water courses or wetlands for fish and wildlife habitat;
- Ensuring that water for hydroelectric power generation and other in-stream uses are balanced against demands from human settlements and farms;
- Striking a balance between water for mining firms and water for adjacent communities; and

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<sup>32</sup> Interview 42 (2009).

<sup>33</sup> Interview 1 (2009).

- Forecasting how much groundwater and how much surface water should be withdrawn to meet current and future water demands

(WRC, 2010; MWRWH, 2007).

From a different perspective, Ghana encounters the challenges associated with integrated water resources management, an agenda that has received a lot of push from the international community. These involve

- Making sure standards of water quality are maintained;
- Ensuring effective water demand management, improved efficiency of use, effective conservation measures, realistic pricing;
- Ensuring that human activities do not adversely impact on long-term availability of water resources. This involves preventing pollution of water sources through indiscriminate discharge of wastes from domestic, commercial and industrial activities;
- Ensuring that the appropriate institutional arrangement and human resources are available; and
- Effectively taking care of the increasing occurrences of water-related emergencies and extreme events

(MWRWH, 2007).<sup>34</sup> In light of these challenges, Ghana has developed policies and laws to manage its water resources.

## **5.4 Ghana's Water Laws**

The water laws in Ghana comprise customary laws, the common laws and statutory laws. These have evolved over a number of years. The evolution has been associated with the changing water management paradigms (Agyenim and Gupta, 2010). According to these authors the change from customary regimes to colonial, post-colonial and modern regimes has also reflected the change in management paradigms from government to governance; centralisation to decentralisation; cultural to neoliberal; and sectoral to integrated approaches.

### **5.4.1 Customary Laws and Practices**

In Ghana, the traditional authorities play important roles in local governance and development. Informal institutions, traditional rules and practices such as taboos and norms are common in controlling water pollution, enhancing conservation and catchment protection and protection of fisheries. These are enforced by the chiefs, fetish priests and priestesses<sup>35</sup> through the use of various sanctions.

Under customary law, water is regarded as public property not subject to individual ownership (Sarpong, 2008). However, where water is in abundance, the rule is relaxed to allow an individual to use the stream or pond, which is naturally on his/her land, but this does not offer him/her ownership over the resource. The length of period an individual

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<sup>34</sup> Interviews 1, 3 (2009), 81 (2010).

<sup>35</sup> Fetish priest/priestess is the traditional religious leader.

enjoys this privilege of using water in this way does earn him/her ownership title. In places where water is scarce or in times of scarcity, people in the community have the right to share its use. Ownership of water is vested in stools, communities and families. Sometimes it is held in trust by the chiefs or fetish priests or priestesses for the people (Sarpong, 2008). Under Akan<sup>36</sup> customary water law, it is clear that the same principle that applies to surface water applies to groundwater (Opoku-Agyemang, 2005). For instance, if an individual digs a well, he/she has the priority of use but has no ownership rights to the water itself. In most Ghanaian culture, water is perceived as a common good therefore, it is morally unacceptable to deny others access to drinking water.

Traditionally, water has been used for domestic purposes, livestock watering and fishing. Customary rules and practices evolved to regulate the use of water for these purposes. These rules were based on reasonable or equitable use of water resources among communities through which a water body flows in order to secure access for everybody. The custom among users of the same part of a river is that each may take as much water as may be required for any purpose, provided he/she leaves enough for others and also leaves the water in a clean state (Opoku-Agyemang, 2005; Sarpong, 2008).

In early societies, the people attributed their water problems to the gods who they believed expressed their displeasure with them in the form of droughts and famines, and their pleasure with plenty (MWH, 1998b). Most river bodies are considered as “gods or goddesses” and are revered. The river gods are believed to be harmful if the river is degraded and helpful if protected (Odame-Ababio, 2003). It is also considered a taboo to pollute water bodies (Opoku-Agyemang, 2005). Reverence for ancestors and belief in the spiritual power of the earth and its resources contributed largely in ensuring customary environmental protection. Communities keep sacred groves at catchments of water bodies, where the chief and elders go once a year during festivals to perform rites for the gods. Entry by unauthorised people to such places is prevented through the institution of taboos.<sup>37</sup>

Some of the norms and values have implications for resource allocation and use, and influence the environmental behaviour of the users and hence ecological sustainability. For instance there are rules that ban fishing during certain times of the year, usually for two to three months (to avoid catching the young fish before they are reasonably matured); and rules that do not allow livestock watering at spots where water is fetched for domestic purposes.<sup>38</sup> The priests/priestesses declare certain days as taboo days for some rivers, where washing of clothes or even drawing of water from the rivers are not allowed. On those days, it is believed that the river gods who should not be seen by any human being come out in various shapes to reel in the water. Containers for fetching water are also regulated by rules determined by the competent local authority, usually fetish priests and priestesses. The prescribed ones are usually earthenware and lately buckets.<sup>39</sup> All these have environmental, sanitary as well as distributional outcomes.

The protection of the environment including rivers is the responsibility of the entire society in traditional societies. Disobedience by one person may bring calamity on the

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<sup>36</sup> Akan is the largest ethnic group in Ghana.

<sup>37</sup> FGD 11 (2009).

<sup>38</sup> FGD 16 (2009).

<sup>39</sup> FGDs 11, 17 (2009).

entire society. To avoid that the entire community is punished by the ancestors and the earth goddess, every member of the community is required to refrain from acts that would endanger the environment and the occupant of the ancestral stool.<sup>40</sup>

Thus, beliefs and norms are used to preserve the water resources. Some of the traditional rules are losing their binding character as members of the communities undergo Christianisation and modernisation. Christian beliefs, for instance, suppress customary beliefs and therefore sanctions that were feared would be meted out on violators have faded into insignificance. In the course of time, and due to modernisation and development, the sacred groves have been run over by timber trucks, chain-saw operators and food and cash crop farmers. This has left the watersheds of most streams bare resulting in the streams drying up.<sup>41</sup>

Customary rules and practices differ among ethnic groups in Ghana and since the urban areas are more ethnically mixed than the rural areas, they are observed mainly in the rural communities (Anokye and Gupta, forthcoming). They are therefore appropriate for small communities where the traditional authority is strong. It is becoming increasingly difficult to apply in urbanised settlements. As such, it is difficult to identify features of customary law beyond the priority given to water for domestic use, which is common throughout the country (Odame-Ababio, 2003). Therefore, incorporation of traditional and local norms, values and practices surrounding the use of water has not been achieved at the national or regional level; it forms part of local bye-laws only in rural areas (see Section 8.2).

#### 5.4.2 Formal Laws

The numerous legislation on water since the colonial era vest powers in various ministries (including agriculture, industry, works and housing and transport) and related state agencies such as the Volta River Authority, the Minerals and Forestry Commissions and the Ghana Irrigation Development Authority for the varied uses of water. These uses include irrigation, power generation, transportation and industrial uses. These enactments did not affect pre-existing customary rights; they sought to regulate uses in areas that customary laws failed to address (EMA, 1998). Discrete institutions emerged that promoted sub-sector development often in isolation from other integral aspects of the wider sector. This resulted in either duplication of some functions or the missing out of some functions. The specialised governmental agencies, departments and parastatal companies were responsible for water management, allocation, protection and data collection in the various water sectors and acted independently. The country did not have adequate institutional and legal infrastructure for planning and managing water resources and no clear policy on who was in control or who was to coordinate the different policies.<sup>42</sup>

The water sector reform in the 1990s saw the passing of the Water Resources Commission Act, Act 522 in 1996. This step was taken to put the diffused functions and authority in water resources management into an integrated form. Then in 2002, the WRC drafted a water policy, which finally came into effect in 2007 as the National Water

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<sup>40</sup> FGDs 10, 12, 17 (2009).

<sup>41</sup> Interviews 5, 6 (2009).

<sup>42</sup> Interview 1 (2009).

Policy. The water policy complements WRC's effort to implement Integrated Water Resources Management (IWRM). The Act 522, 1996 mandated the WRC to regulate and manage the water resources in Ghana and coordinate government water policies (Part I, Section 1 (1) and Section 2 (1)). The WRC Act (Act 522, 1996) addresses water resources in its entirety covering both underground water and surface water. It also vests the water resources in the President on behalf of and in trust for the people of Ghana (Part III, Section 12 of Act 522, 1996). Part III, Section 13 entrusts the authority to allow for diversion, damming, storing or abstracting water as well as constructing any works for the use of water resources in the WRC.

Embodied in the WRC Act 522, 1996 is the policy on stakeholder participation. The Act requires engagement of stakeholders in water management at all levels. It guarantees participation by mandating the WRC to collaborate with other government agencies, the public and the private sector in the discharge of its functions. The Act assigns the WRC with a wide range of responsibilities (see 5.5.2); it as well provides for a wide range composition of its (WRC's) members. The Act ensures inclusion of the main stakeholder groups and sectors involved in water resources in decision-making. Represented on the Commission's board are: (a) the major water user agencies (Ghana Irrigation Development Authority (GIDA), Ghana Water Company Limited (GWCL), Volta River Authority (VRA) and Minerals Commission (MC)). Others are: (b) regulatory agencies (Environmental Protection Agency (EPA), Forestry Commission (FC) and Minerals Commission (MC)); and (c) water resources planning input providers (Hydrological Services Department (HSD), Meteorological Service Division (MSD) and Water Research Institute (WRI)). Section 3 Subsection 1(b) (ii) of the Act allows for representation of the private sector. Subsection 1 (d) and (e) of the same Section 3 also allows for representation of traditional chiefs and the public respectively. Missing from the membership list is the Community Water and Sanitation Agency (CWSA), a key water agency that facilitates the delivery of potable water and sanitation facilities in rural areas. CWSA served on the first (1998-2007) board of the Commission but not on the second and third (2007 and 2010) boards. This is because the provision made under Part II Section 3 Subsection 1(b) (ii) of the WRC Act is for organisations producing potable water to have a representation on the board. This clause does not ensure that CWSA remains a permanent representative. This situation is not in favour of community/rural water delivery. The omission of CWSA from the board is one of the shortcomings of the WRC Act 522, 1996. Of importance is the fact that representatives of government agencies far outnumber representatives from the public and private sectors. This may tilt decisions in favour of the government.

Traditionally, the water sector had been associated with drinking water supply and only partially with sanitation and hygiene considerations for household and health (Opoku-Agyemang, 2004). The Ghana Water and Sewerage Corporation (GWSC) was transformed from the Water Supply Division of the Ministry of Works and Housing in 1965 by an Act of Parliament (Act 310) to manage water supply systems; and establish, operate and control the sewerage systems in Ghana (GWCL, 2012a). A National Community Water and Sanitation Programme (NCWSP) was launched in 1994. Four years later in 1998 the Community Water and Sanitation Division (CWSD) of the CWSC was transformed into the CWSA and separated from GWSC by an act of parliament (CWSA, 2007; CWSA Act 564, 1998). The GWSC was in turn converted into a limited



liability company, GWCL in 1998 and started operations in 1999 concentrating on urban water delivery (GWCL, 2012a) (see also 7.3.1 and 7.3.2).

The CWSA Act 564, 1998 embodies a policy on stakeholder participation. The national community water and sanitation sub-sector policies and strategies were informed by the decentralisation policy that was taking hold on Ghana's development strategies since 1988. The CWSA developed strategic perspectives on advancing the decentralisation of the water sector. The CWSA Act 546 limits the institution to the regional level, with the establishment of Regional Water and Sanitation Teams (RWSTs). To put into action the decentralisation policy and participation of local stakeholders, the institutional responsibility for water and sanitation at the local level is instituted within the District Assemblies (DAs), the District Water and Sanitation Teams (DWSTs). The DWSTs are established to coordinate and implement projects at the district level. Section 2 Subsection a (ii) of Act 564 mandates CWSA to encourage, through the DAs, the active involvement of communities in designing, planning, construction and community management of projects related to safe water development and related sanitation services. These were thought to enhance democracy, transparency and accountability.

Section 2 Subsection 2(c) of CWSA Act 564, 1998 also mandates the CWSA to encourage private sector participation in the provision of safe water supply and related sanitation services in rural communities and small towns. Subsection 2(e) requires the CWSA to assist and coordinate with NGOs engaged in the development of rural communities and small town water supply. The CWSA is also required to collaborate and cooperate with state agencies such as the WRC, EPA and GWCL and private bodies whose activities relate to the provision of safe water (Section 2 Subsection 3 of CWSA Act 564, 1998).

As mentioned earlier in this section, the water-related institutions existed for single use purposes in the past. In practice, there was no mechanism for coordination before the WRC was established. Fragmentation of the sector institutions and their mandate influenced the need for a comprehensive water policy addressing all aspects of water resources management. The Water Policy, which was influenced by international water discourses, is partly based on the principles of Integrated Water Resources Management (IWRM). The National Water Policy recognises the importance of efficient management and protection of the country's water resources in the light of future development plans and reconfirms the position of the WRC as coordinating and regulating body of the water sector.

The National Water Policy addresses water issues concerning water for human consumption; agricultural and industrial production; energy supply; and for sustaining the environment (see objectives of the water policy further on in this section). As such, the National Water Policy is important to the Ghana Shared Growth and Development Agenda (GSGDA), which spans from 2010 to 2013. The GSGDA follows the Growth and Poverty Reduction Strategy (GPRS) II (2006-2009). The GSGDA is basically the same as the GPRS II but with an additional focus on oil and gas development. The GSGDA and GPRS II are informed by Ghana's commitment to relevant international agreements such as the Millennium Development Goals (MDGs), New Partnership for Africa's Development (NEPAD) and the underlying obligations set out in the Constitution of the Republic of Ghana.

Water is seen as a cross-cutting factor in the current development priorities of Ghana and it is linked to all the eight Millennium Development Goals. The GSGDA focuses on modernising agriculture to increase agricultural productivity and enhance food security (irrigation, water conservation and watershed management). The provision of water was highlighted in the GPRS II, as being “critical to achieving favourable health outcomes which, in turn, facilitate economic growth and sustained poverty reduction” (MWRWH, 2007: 9). There is the notion that integrating water resources development stimulates improvements in health (through safe drinking water and sanitation) and combines with the transformation of production, including food security to enhance livelihoods of the poor (Royal Danish Ministry of Foreign Affairs, 2002).

The overall goal of the National Water Policy includes reducing vulnerability while assuring good governance for present and future generations (MWRWH, 2007: 16). The achievement of this goal requires the elements of good governance, which includes stakeholder participation. Included in the objectives of the water policy are to ensure:

- “availability of water in adequate quantities and quality to sustain nature, biodiversity and the aquatic ecosystem;
- access to safe drinking water and sanitation facilities for the entire population, both rural and urban;
- availability of water for hydropower generation, industrial use, water transport and recreation; and
- an effective management system for sustainable use of water and fully integrated into the socio-economic development of the country and national development planning”

(WRC, 2008a: 31).

The water policy is guided by fourteen basic principles. These broad principles seek to provide directions for sustainable management, development and use of water in Ghana. These are outlined in Box 5.1 below. In the light of these principles, the policy proposes a number of measures and strategic actions to address relevant issues under water resources management, urban water supply and community water and sanitation for sustainable water management, development and use of water in Ghana. The policy document, MWRWH (2007) spells out implementation arrangements including institutional roles and responsibilities, standards and regulations and these are presented in Table 5.2 below. These are grouped under four thematic areas: i) participation and inclusiveness regarded as necessary for sustainable management; ii) good governance, which is also anticipated to include the elements of participation; iii) ecological sustainability, which serves to conserve the resource base for the continued use of the resource; and iv) equity, sustainability and efficiency of the water facilities.

**Box 5.1 Basic Principles of the Ghana Water Policy**

- a) The fundamental right of all people without discrimination to safe and adequate water to meet basic human needs;
- b) Meeting the social needs for water as a priority, while recognising the economic value of water and the goods and services it provides;
- c) Recognising water as a finite and vulnerable resource, given its multiple uses;
- d) Improving equity and gender sensitivity;
- e) Integrating water resources management and development with environmental management in order to ensure the sustainability of water resources in both quantity and quality;
- f) The precautionary principle that seeks to minimise activities that have the potential to negatively affect the integrity of all water resources;
- g) Coordinating water resources planning with land use planning;
- h) Adopting the river basin (or sub-basin) as a planning unit;
- i) The principle of polluter pays, to serve as a disincentive to uncontrolled discharge of pollutants into the environment;
- j) Subsidiarity in order to ensure participatory decision-making at the lowest appropriate level in society;
- k) The principle of solidarity, expressing profound human companionship for common problems related to water;
- l) The principle that international cooperation is essential for sustainable development of shared basins;
- m) Integrating river basin management with management of the coastal zones and wetlands; and
- n) The greatest common good to society in prioritising conflicting uses of water.

Source: MWRWH (2007: 14).

The table depicts a number of measures and actions proposed for stakeholder participation in the effective management and development of water resources. These measures are also meant to promote good governance, ecological sustainability, equity, and efficiency. Inherent in some are the empowerment of stakeholders in the management of water resources. This is demonstrated in the ability the communities now have in deciding where to site water facilities, and their involvement in the management of the facility on a daily basis (see 7.4.2 for details).

The Water Resources Commission developed water policy to address the efficient and sustainable development, management and use of the country's water resources to improve health and livelihoods and reduce vulnerability in the light of future development plans. Thus, the guiding principles of the water policy embody stakeholder participation and the policy measures promote stakeholder participation.

**Table 5.2 Policy Measures for Effective Stakeholder Involvement in Ghana's Water Management**

Policy measures			
To promote participation and inclusiveness of stakeholders	To promote good governance	To promote ecological sustainability	To promote equity, sustainability and efficiency
Public participatory mechanism - disadvantaged groups, youth, and local communities	Democratisation of society, through transparent & accountable leadership	Practices that avoid damage to critical natural capital	Sustain water projects through cost recovery
Representation of women at all levels	Adherence to the rule of law and access to information	Water resource planning	Apply cost sharing with vulnerable communities to cover capital costs
Interdisciplinary and participatory research	Water Use Regulations, 2001 (L.I. 1692)	Public-private partnerships for protection and conservation	DAs contribution to capital cost of water projects by poor and vulnerable communities
Partnership between public and private sectors in the provision of water supply	Public hearings provided under the PURC Act, 1997 Act 538	Use of cleaner and efficient technologies	Average water tariffs reflect full efficient cost of water supply
Link data collection & regulatory agencies on water	Cost effectiveness at all levels in the water sector	Effective waste management and agricultural practices	Timely payment of water bills by organisations on government subvention
Coordination between MWRWH and MLGRD	Accountability and transparency through timely reporting and participatory discussion	Land degradation control to reduce soil loss and siltation of water bodies	

## 5.5 Stakeholder Participation and Ghana Water Policy

Stakeholder participation is one of the key principles of integrated water resources management (IWRM) (GWP, 2000) because it is seen as a way of ensuring equity (Placht, 2007; Giupponi et al., 2006). It is argued that stakeholder participation in a government's policymaking and planning processes and activities brings about transparency and thus contributes to good governance (Poluha and Rosendahl, 2002). Therefore stakeholder participation is anticipated to be a key factor in successful implementation of water resource management plans and policies (Mouratiadou and Moran, 2007; Pahl-Wostl, 2007). The relevance of these issues (the role of stakeholder participation) in the water policy formulation process and implementation of measures in Ghana is examined in this section.

### 5.5.1 Policy Formulation

Policy formulation was undertaken at the national level with participation of the relevant stakeholders. The WRC led the national water policy formulation process. Other government institutions played an important role as key stakeholders. The WRC held consultative meetings with ministries, departments and agencies whose mandates and activities impinge on water resources. These were the Forestry Commission (FC), Ministry of Lands and Forestry (MLF) now Ministry of Mines, Lands and Natural

Resources (MLNR), Minerals Commission (MC), Volta River Authority (VRA), Ghana Water Company Limited (GWCL), Community Water and Sanitation Agency (CWSA), Ghana Irrigation Development Authority (GIDA) and Environmental Protection Agency (EPA). These meetings resulted in the review of laws that affect water resources. The inputs of these stakeholders had influence on the water policy.<sup>43</sup>

The need for research to assist in proffering better alternatives for the management of the resources became apparent. To achieve this, effective collaboration with the Water Research Institute (WRI) and other private consultants (including Environmental Management Associates and Nii Consult) became imperative. These bodies undertook a series of comprehensive water resources management (WARM) studies between 1996 and 1998.<sup>44</sup> A consortium of donor agencies (including CIDA, DANIDA, DFID, UNDP and the World Bank) and the Government of Ghana commissioned the studies. The WARM studies identified gaps, strengths and weaknesses in water management and drafted propositions. In addition, other studies were carried out to inform the water policy as well (WRC, 2003b; Ayibotele, 2006). The inputs of these studies had influence on the policy.<sup>45</sup>

The various agencies (WRC, CWSA and GWCL) developed technical briefs which were given to identified technical individuals and organisations involved in water resources (IWMI-Ghana, NGOs, universities, CWSA, GWCL, WRI, HSD, MDAs, etc.) to give their comments.<sup>46</sup> The first draft was subjected to a series of stakeholder workshops with water user agencies, mining companies, traditional rulers and NGOs, which sought their suggestions and views and incorporated them into the document (WRC, 2003c).

The proposed policy was then subjected to Strategic Environmental Assessment (SEA)<sup>47</sup> with technocrats from the universities, research institutes and other government water agencies to “fine-tune” the policy. Actions were tested and ranked and improvement on the proposed actions and measures made and submitted to the Ministry of Water Resources, Works and Housing (MWRWH) with a comprehensive list of all stakeholders who were involved with the formulation.<sup>48</sup> The MWRWH has the authoritative function of initiating and formulating policies of its specific sector. The participation of the different stakeholders, the intensity of their participation and the type of knowledge they contributed to the water policy formulation process are shown in Table 5.3. The intensity of participation is determined by the role and degree of influence the input had on the water policy.

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<sup>43</sup> Interviews 1, 3, 4 (2009), 81, 83, 85 (2010).

<sup>44</sup> Interviews 1, 40 (2009).

<sup>45</sup> Interviews 1, 41 (2009).

<sup>46</sup> Interviews 40, 41, 42 (2009), 85 (2010).

<sup>47</sup> SEA is “a systematic process of evaluating the environmental effects of a policy, a plan or a programme and its alternatives, including documentation on findings to be used in publicly accountable decision-making” (WRC, 2007a: 57).

<sup>48</sup> Interviews 1, 3, 40, 41 (2009), 85 (2010).

**Table 5.3 Participation of Stakeholders and Intensity of their Participation in the National Water Policy Formulation Process (1996-2006)**

Stakeholders	Participation	Type of knowledge contributed	Intensity of participation
WRC, FC, MLNR (formerly MLF), MC, VRA, CWSA, GWCL, GIDA, EPA	Review of laws that impinge on water resources in consultative meetings	Bureaucratic	Less intensive
WRI, private consultants	Studies that informed drafting of water policy: a) Comprehensive water resources management (WARM) studies	Scientific	Less intensive
ISSER, IAS	b) Other studies	Scientific	Less intensive
Consortium of donor agencies & GoG	Commissioning and funding WARM studies	Bureaucratic	Less intensive
CWSA, GWCL	Development of technical briefs	Bureaucratic	Intensive
IWMI-Ghana, universities, CWSA, GWCL, WRI, HSD, MDAs, NGOs	Comments on technical briefs	Scientific, bureaucratic	Less intensive
User agencies, mining companies, traditional rulers & NGOs,	Suggestions and views on first draft policy	Lay or non-professional, practical	Tokenism
Technocrats from the universities, research institutes & other government water agencies	SEA on proposed policy. Actions tested and ranked. Proposed actions and measures improved	Scientific, bureaucratic	Intensive
WRC	Draft policy prepared and submitted to MWRWH	Bureaucratic	Intensive
MWRWH	Overseeing overall policy formulation. Further processing and study of draft policy. Submission of policy to cabinet for approval	Bureaucratic	Intensive

### 5.5.2 Implementation of Water Policy Measures

#### *The principal sector agencies*

The principal sector agencies that facilitate and implement policy measures include the Ministry of Water Resources, Works and Housing (MWRWH); Water Resources Commission (WRC); Ghana Water Company Limited (GWCL); Community Water and Sanitation Agency (CWSA); the Ghana Irrigation Development Authority (GIDA); and the Metropolitan/Municipal/District Assemblies (MWRWH, 2007). The lead government organisation responsible for water is the MWRWH. Its functions include formulation of policy as well as planning and coordination of water resources management programmes. In addition it is responsible for monitoring and evaluation of programmes on water supply and sanitation-related issues (MWRWH/CWSA, 2008). The Water Directorate of the ministry (MWRWH) serves as the focal point for coordination of the water and sanitation sector; facilitates monitoring of sector development; and advises the Minister on sector policy issues. The key agencies of MWRWH carrying out the ministry's water resources

management and drinking water programmes are the WRC, GWCL and CWSA (WRC, 2008a).<sup>49</sup>

The WRC provides a focal point in fostering coordination and collaboration among the various actors involved in the water resources sector hence enhancing participation of these actors in water management. Its functions as stated under Part I Section 2 (2) of WRC Act 522, 1996 are:

- a) “Propose comprehensive plans for the utilization, conservation, development and improvement of water resources;
- b) Initiate, control and coordinate activities connected with the development and utilization of water resources;
- c) Grant water rights;
- d) Collect, collate, store and disseminate data or information on water resource in Ghana;
- e) Require water user agencies to undertake scientific investigations, experiments or research into water resources in Ghana;
- f) Monitor and evaluate programmes for the operation and maintenance of water resources;
- g) Advise the government on any matter likely to have adverse effect on the water resources of Ghana;
- h) Advise pollution control agencies in Ghana on matters concerning the management and control of pollution of water resources;
- i) Perform such other functions as are incidental to the foregoing.”

The functions are such that the WRC requires the collaboration and cooperation of stakeholders. Some of the tasks listed above can be undertaken by other organisations and entities with WRC providing support and facilitation. The Commission is empowered to co-opt any person to attend any of its meetings except that such a person cannot vote at the meeting (Part II Section 6 (5) of WRC Act 522, 1996). The Commission may also appoint committees for the discharge of its functions and assign to them functions determined by the commission. Members of such committees could be members, non-members, or a mixture of both (Part II Section 7 of WRC Act 522, 1996). This gives the opportunity for non-members to participate in decision-making by sharing knowledge, ideas and views. A committee comprising entirely of non-members may only advise the Commission. There is promotion then of broad stakeholder participation. The WRC has sub-committees; these committees serve as platforms for sector coordination in water resource management (WRC, 2008a).<sup>50</sup>

One of WRC’s functions is to grant water rights to all uses of naturally occurring water - consumptive, non-consumptive and in-stream. The objective of regulating water use and “water prices” is to: (a) generate funds for water resources management activities including participatory processes. (b) To institute charges through the granting of water rights, which are fair with regard to uses made of the resources, and which will facilitate promotion of water conservation and protection of the aquatic environment; and (c)

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<sup>49</sup> Interviews 41, 42 (2009), 85 (2010).

<sup>50</sup> Interviews 1, 40 (2009).

establishment and maintenance of a data base for informed management of the water resources.<sup>51</sup>

Legislative Instrument, L.I. 1692 Water Use Regulations, 2001 and WRC Act 522, 1996 Part III Section 16, are laws that regulate water use in Ghana. Under these laws, individuals, agencies and authorities may obtain a permit for groundwater or surface water abstraction for domestic, commercial, industrial and agricultural use. Any person who wants to use a water resource has to apply to the WRC in writing for the grant of a water right. The Commission, on receipt of applications, is mandated to publish in the government Gazette notice of an application and the area in respect of which the application is made. After the publication of the Gazette, persons who claim that their interests will be affected by the grant of water rights may notify the Commission (in writing unless otherwise specified in the notice) within three months of the notice in the Gazette of their objection. He/she shall specify the grounds of the objection (Part III Section 16(4) of WRC Act 522, 1996; Section 3 (2) of LI 1692 Water Use Regulations, 2001). The public is hereby involved in decision-making in the granting of water rights. The public is invited to react or show concern if any. However, there is a high possibility of excluding a portion of the population by virtue of their literacy level. The question is how many can read and write and notify the WRC if their interest is affected especially in the rural areas where the adult illiteracy rate is 61.8 percent (Ghana Statistical Service, 2008)? The available information indicates that the WRC has not received any protest since the granting of water permits.<sup>52</sup>

The WRC is obliged on receiving an application to make investigations as it considers necessary including consultations with the inhabitants of the area of the water resources concerned and likely to be affected by the proposed use (Section 5 (2) (b) of LI 1692). Provision is made under Section 6 (1) of LI 1692 for the WRC to hold a public hearing especially where the water use may cause dislocation, relocation, or resettlement or in any manner cause the destruction of the natural water resources of the community. Under Section 6 (2) of LI 1692, the WRC is to collaborate with traditional authorities of the communities, the relevant government institutions and agencies, notably the EPA and the DAs for the purpose of conducting public hearing. The collaboration with traditional authorities is to ensure that existing rights and customary practices in managing natural resources are considered before the granting or refusal of a water right.<sup>53</sup> So that those with customary water rights linked to their land rights will not be deprived of their water right to avoid conflict. In this light the role of the traditional/fetish priests and priestesses are considered, especially in the demarcation of buffer zones and sacred groves (Opoku-Agyemang, 2005). Conflicts may arise when pre-existing customary rights are unrecognised or weakened by imposition of new water rights and this explains the provisions for consultation with the traditional authorities and inhabitants communities (potential customary right holders).<sup>54</sup>

There are categories of water uses, which are exempted from permit processing but are subject to registration under Section 10 of LI 1692. These are water abstracted by

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<sup>51</sup> Interviews 1, 41 (2009).

<sup>52</sup> Interviews 1, 41 (2009).

<sup>53</sup> Interviews 1, 5 (2009).

<sup>54</sup> Interviews 1, 5 (2009).



mechanical means and used for any purpose where the abstraction level does not exceed five litres per second or subsistence agricultural water use for land areas not exceeding one hectare. Section 11 of LI 1692 requires that an application for registration of a registrable water use to be submitted to the relevant DA. The DA registers the water use and then furnishes the WRC quarterly, with a list of all registered water uses in its locality. The Environmental Health and Sanitation Division of the DAs are in charge of the registration.<sup>55</sup> Strong cooperation of the Assemblies is needed here for provision of data on water utilisation.

To encourage stakeholder participation in water resources management and facilitate the performance of its functions the WRC undertakes awareness creation among authorities and communities regarding the following issues:

- Regulations concerning water use and water resources abstraction;
- Minimisation of water use to conserve scarce resources; and
- Changing poor watershed management practices

(WRC, 2003c). The participatory strategies used in informing and educating the public on these issues are provided in Box 5.2.

**Box 5.2 Participatory Education Strategies Adopted by the WRC**

- Publication in the daily newspapers of write-ups and articles on specific water issues and WRC functions;
- Production of flyers with specific topics such as water abstraction permit and registration system;
- Stakeholder workshops in river basins to facilitate formation of basin-based coordinating water management structures;
- Seminars for DA representatives and main water users on application and interpretation of the Water Use Regulations;
- Participation in radio programmes on local FM stations; and
- Participation in annual national events such as World Water Day and World Environment Day.

Source: WRC, 2003c; interviews 1, 5, 2009

Of these methods, the radio programmes on local FM stations seem to have had a greater effect since the programmes are made in the local language generating a lot of interest among rural communities. The rural communities have the privilege of calling into the programme during discussions to make comments and seek clarification on issues. The other methods were less effective among the rural people, especially the newspaper write-ups, articles and flyers that were in English. These strategies, however, were useful among the urban dwellers (see 6.4.4 for other examples).<sup>56</sup>

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<sup>55</sup> Interviews 1, 89 (2009).

<sup>56</sup> Interviews I, 5, 19, 40 (2009).

The water policy limits the activities of the GWCL to production and distribution of drinking water in urban areas, and billing and collection of revenues. However, in 2006 the GWCL entered into a public-private partnership (PPP) with a private operator and ceded its primary functions to the private operator, Aqua Vitens Rand Limited (AVRL). The policy measure was to promote efficiency in urban water supply services and to attain financial sustainability. This also led to the removal of government subsidies, moving water delivery services towards full cost recovery and anticipated sustainability. The GWCL became responsible for overall planning, managing and implementation of urban water supply. It retains its monitoring responsibilities to ensure that water is still produced and distributed in a way that meets consumer needs and expectations. The private operator was responsible for operations, maintenance, distribution, billing and revenue collection (GWCL, 2006).<sup>57</sup> However, this contract expired in 2011 and the Government did not renew it. See 7.3.1 for the introduction of the PPP in the urban water supply.

The water policy also prescribes the role of the Community Water and Sanitation Agency (CWSA) to be the facilitation of rural water supply and sanitation. It sets out the means by which the communities are enabled to decide on a water investment programme, and exercise ownership and management of infrastructure and assets, including their running, maintenance and repair. The policy also requires that supply of water to rural communities be demand driven and community managed. The CWSA formulates strategies for mobilisation of resources for the execution of safe water development and sanitation programmes in rural communities and small towns. It also prescribes standards and guidelines for safe water supply and supports DAs to ensure compliance by the suppliers of the services (MWRWH/CWSA, 2008).<sup>58</sup> The CWSA was charged with coordinating and facilitating the implementation of the National Community Water and Sanitation Programme (NCWSP) in the DAs. The CWSA works with the DAs to ensure sustainability of water service delivery in the rural communities and small towns.<sup>59</sup> This arrangement draws the Ministry of Local Government and Rural Development (MLGRD) into the organisation of rural water service delivery.

The DAs are authorised by the Local Government Act 462, 1993 to exercise political and administrative authority in the districts, provide guidelines, give direction to and supervise all the administrative authorities in the districts. Implied in these functions are their water-related responsibilities. They are responsible for the planning, implementation, operation and maintenance of water and sanitation facilities as well as management of the environment and are the legal owners of communal infrastructures in rural communities and small towns.<sup>60</sup>

The Ghana Irrigation Development Authority (GIDA) concentrates on water conservation and irrigation. It is responsible for the formulation of plans to develop the country's water resources for irrigated farming, livestock watering, and supports fish culture in ponds and dams. Some rural communities also depend on GIDA water sources for water for

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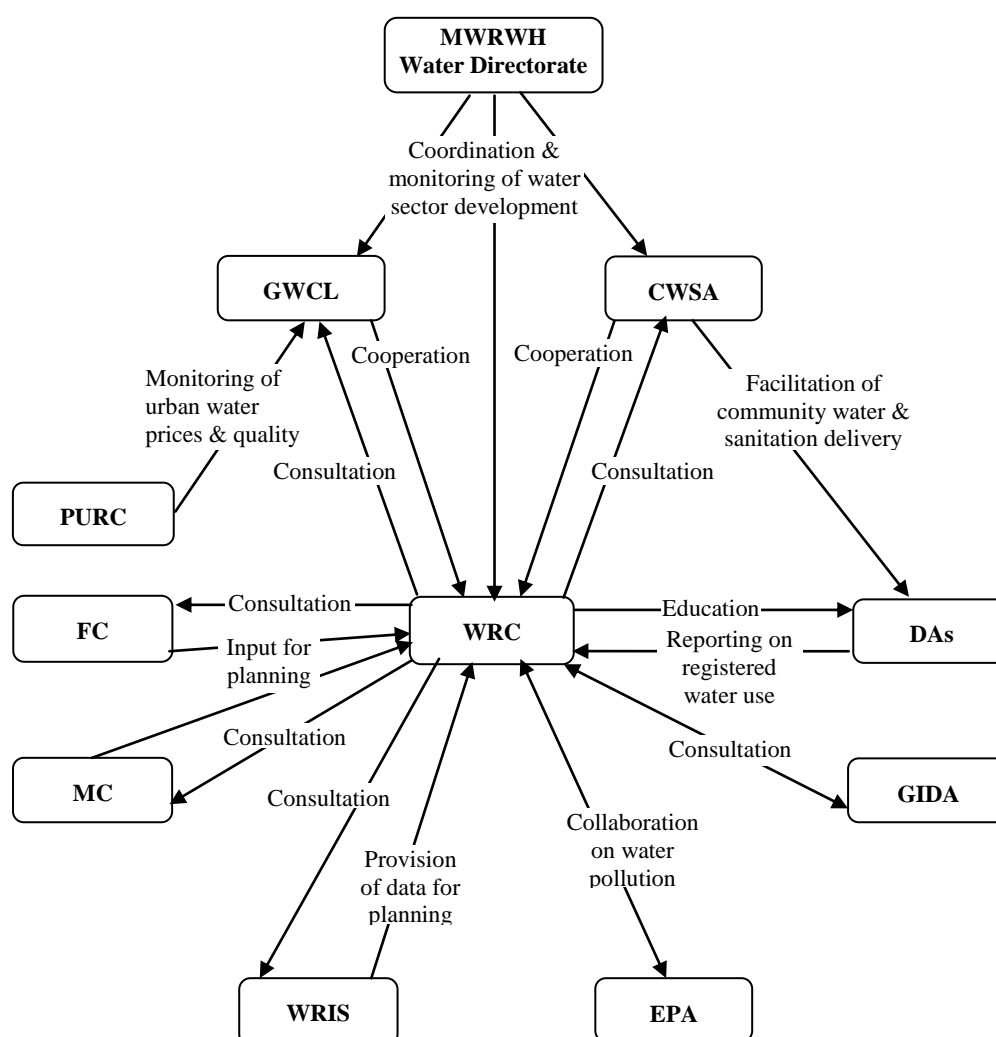
<sup>57</sup> Interviews 3, 42 (2009).

<sup>58</sup> Interview 85 (2010).

<sup>59</sup> Interviews 14, 15 (2009).

<sup>60</sup> Interviews 7, 32, 33 (2009).

domestic uses (MWRWH, 2007).<sup>61</sup> The relationships among these agencies and commissions are illustrated in Figure 5.1.



**Figure 5.1 Relationships Among Water Resource Agencies and Commissions**

### *The allied sector agencies*

The allied sector agencies play supporting roles including regulation and oversight (MWRWH, 2007). The Environmental Protection Agency (EPA) is a regulatory body and collaborates with the WRC on water related issues such as on environmental assessment and on efficient management of water resources with special emphasis on pollution. Its role among others is protection of water resources and regulation of activities within catchment areas. The EPA provides guidelines for developments that affect the environment. It has developed an environmental impact assessment procedure that must be followed for approval of development projects. The EPA determines whether a

<sup>61</sup> Interview 4 (2009).

proposed or existing water use requires an environmental management plan.<sup>62</sup> The EPA serves on the Water Technical Committee of the WRC. EPA and WRC have signed a Memorandum of Understanding (MOU) spelling out the responsibilities of each to avoid duplication and confusion. The EPA sets standards (or limits) for pollution and grants waste discharge permits. It issues permits with conditions and it has the mandate to withdraw the permit when the permit holder violates the conditions.<sup>63</sup> An environmental impact assessment of a proposed water use has to be approved by EPA before consideration by WRC for a water permit.<sup>64</sup>

The Public Utilities Regulatory Commission (PURC) established by the Public Regulatory Utility Commission Act 538, 1997 has a role in examining and approving water and other tariffs and ensuring that the interests of consumers are protected including the quality of drinking water provided by GWCL. The Act does not apply to private and rural water supplies (Section 47 of Act 538). It also ensures that in seeking the welfare of consumers, the economic efficiency of service providers is not compromised. The PURC sets water quality standards in accordance with the Ghana Standards Board's requirements. It ensures that the decisions it takes provide incentives to private operators to invest and sustain development in the water sector by maintaining the balance between tariff levels and investment, operation and maintenance costs of the utility services.<sup>65</sup>

The Water Resources and Information Services (WRIS) institutions collect, collate and disseminate relevant information including water related information. They provide these and water related services to support planning and decision-making. WRC collaborates with the WRIS institutions for data and information necessary for it to perform its monitoring and regulatory activities (issuing of water right/use permit and drillers licence).<sup>66</sup> The WRIS institutions are: Metrological Services Department (MSD), Hydrological Services Department (HSD) and Water Research Institute (WRI). The HSD is responsible for monitoring the water flows in rivers. The MSD collects rainfall and evapotranspiration related data and provides metrological services to government departments, agencies and the general public. The WRI collects surface water quality data, undertakes scientific investigations, experiments or research into water resources. All the three have representation on the WRC board (WRC, 2008a).<sup>67</sup>

The Minerals Commission is represented on the WRC's board as one of the major water users and regulatory bodies. Its participation in decision-making concerning water resources is very important because the views of the operators in the mining industry are necessary for determining the feasible control standards and measures. The Ankobra Basin, which hosts several mining companies, has two representatives from the mining industry (one for small-scale companies and one for large-scale companies) on the Ankobra Basin Board.<sup>68</sup>

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<sup>62</sup> Interviews 8, 12 (2009).

<sup>63</sup> Interviews 1 (2009), 81 (2010).

<sup>64</sup> Interviews 1, 41 (2009).

<sup>65</sup> Interviews 3, 64 (2009).

<sup>66</sup> Interviews 1, 41 (2009).

<sup>67</sup> Interview 40 (2009).

<sup>68</sup> Interview 1 (2009)

The Ministry of Mines, Lands and Natural Resources (MLNR) formulates broad policies for the forestry and land sectors and oversees the implementation of these policies by its agencies. The agencies are: Forestry Commission; Forestry Department; Game and Wildlife Department; Minerals Commission; and Lands Commission. The Ministry's policy implementation is constrained by growing pressure on the forests. The activities causing this pressure affect water resources as well and require combined and coordinated efforts to determine feasible counter measures. The MLNR is not listed as a member of the WRC board but the Forestry Commission is, hence views and information offered are limited to those of forestry leaving those on land.<sup>69</sup> The relationships among the allied and principal agencies and commissions are illustrated in Figure 5.1 above. The roles of different stakeholders in the implementation of water policy measures and their intensity of participation are shown in Table 5.4.

**Table 5.4 Role of Stakeholder Participation in Implementation of Water Policy Measures**

Stakeholders	Roles	Intensity of participation
MWRWH/Water Directorate	Plans, coordinates, collaborates, monitors & evaluates programmes for water resources management, water supply & water-related sanitation	Intensive
WRC	Regulates & manages water resources; coordinates water related policies. Fosters coordination & collaboration among actors in the water sector	Intensive
GWCL	Plans, manages & implements urban water supply	Intensive
Private operator (AVRL)	Operated, maintained, distributed, billed & collected revenue - urban water supply (2006-2011)	Intensive
CWSA	Facilitates, prescribes standards & guidelines for water supply & sanitation in rural communities and small towns.	Intensive
DAs	Plan, implement, operate & maintain water & sanitation facilities; register water use	Intensive
GIDA	Formulates plans to develop water resources for agriculture & supports fish culture	Intensive
EPA	Protects water resources & regulates activities within catchment areas. Sets standards for water & environmental pollution	Intensive
PURC	Examines & approves water & other tariffs; seeks consumers' welfare & ensures the economic efficiency of service providers	Intensive
WRIS (WRI, HSD and MSD)	Collect, collate & disseminate water related information	Less intensive
MC	Participates in decision-making concerning water resources management	Intensive
MLNR	Promotes management & enhancement of forest & wildlife resource, preservation of vital soil and water resources, conservation of biological diversity & the environment	Less intensive
NDPC	Integrates water resources development plan in the national plan	Less intensive

The National Development Planning Commission (NDPC) regulates the development planning system by legislative instruments and guidelines. The Commission prepares a

<sup>69</sup> Interviews 1, 6 (2009), 83 (2010).

broad based, comprehensive national development plan (see Chapter 4). By principle, the NDPC integrates the water resources development plan in the national plan.<sup>70</sup> Despite its position in the planning process, the NDPC is not represented on the Water Resources Commission.

## **5.6 Inferences**

The chapter shows that though water laws in Ghana were fragmented, the National Water Policy now provides an organisational framework for coordinated water management. The National Water Policy formulation was an output of participatory processes with inputs from relevant stakeholders through consultation, research and funding. Comments and suggestions received through a series of stakeholder workshops helped shape the policy. The proposed policy was also subjected to Strategic Environmental Assessment (SEA) with technocrats. The National Water Policy provides the potential for efficient and sustainable development, management and use of the country's water resources to improve health and livelihoods and reduce vulnerability in the light of future development plans.

Stakeholder participation in water resources management at the national level takes the form of (a) developing policy and legislation, and provision of the necessary guidelines for various water uses and services as well as for environmental health and sanitation; (b) policy implementation and monitoring; and (c) cooperation and collaboration between government agencies in performing their functions. The intensity of participation of stakeholders who are mainly government agencies is high because of their involvement in the policymaking processes.

Generally, the water laws and the national water policy of Ghana are seen as having the potential of promoting community participation, private sector participation and public-private partnership in the management of water especially in water delivery sub-sector. This is demonstrated through: first, the WRC Act 540, 1996, which enhances participation by broadening the stakeholder base (state agencies, the public and the private sector) in decision-making in planning WRC's activities and in the discharge of its functions. The second is the CWSA Act 564, 1998 which also encourages the active involvement of the grassroots organisations in decision-making and implementation of safe water delivery system and sanitation. The Act 564 encourages private sector participation; and requires CWSA to assist and coordinate with NGOs engaged in the development of rural communities and small town water supply. Finally, Act 564 provides for collaboration and incorporation of CWSA with state agencies in the provision of safe water. Third, Legislative Instrument, L.I. 1692 Water Use Regulations, 2001 promotes participation of the public and the DAs in the decision to grant a water right.

However, there are some weaknesses found in the water laws: first, the proportion of government stakeholders compared to public stakeholders serving on WRC's board is high, which is likely to tilt decision making in favour of government with limited consideration for the citizenry. Second, the L.I. 1692 Water Use Regulations, 2001 makes

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<sup>70</sup> Interview 82 (2010).

no provision to empower illiterates to express their concerns as they cannot read or write and notify the WRC if their interest is affected.

In the light of the national policy on decentralisation, water management is being devolved to the local level (the basin and the community levels) for stakeholders at the basin to be part of the decision-making process as well as the implementation processes. The subsequent chapters examine how these are playing out in managing water for different uses and sustainability at the basin level.

## 6 Stakeholder Participation and Water Resource Protection in the Densu Basin

### 6.1 Introduction

Participation in the management of resources takes different forms. The present chapter dwells on the various participatory methods and the intensity of participation. The chapter explores how these methods and the intensity of participation differ in the protection of water resources at two governance levels (basin and community) by focusing on the role played by the different stakeholders. The following questions are set to direct the chapter: How are water resources in the Densu Basin protected? How do the different stakeholders interact? What participatory methods/strategies are employed to elicit the involvement of the stakeholders? What is the intensity of participation of the various stakeholders and what are the implications for stakeholder participation in water resources protection?

The methods used in addressing these questions include a review of the literature and existing documents, key informant, individual and group interviews, attendance of sub-committee meetings and quarterly meetings of the Densu Basin Board, and observations. The second section of the chapter discusses the water situation in the Densu Basin (6.2). The third focuses on challenges facing the sustainability of water resources in the Densu Basin (6.2). The fourth section (6.4) examines how stakeholders address the challenges. Section 6.5 summarises the methods, extent and outcome of stakeholder participation in water resource protection activities at the Densu Basin. The chapter concludes with inferences drawn from the various sections.

### 6.2 Water Situation in the Densu Basin

#### 6.2.1 Freshwater Availability

The Densu River system comprises the main Densu River and its tributaries; the major ones being Kuia, Suhyen, Nsukwaw, Mame, Jei, Adeiso, Nsaki and Drobo (Hagan et al., 2011; Karikari and Ansa-Asare, 2009) (see Figure 1.1). They drain an area of 2,600 km<sup>2</sup>. Downstream of the Densu is the Weija Lake<sup>71</sup>, an artificial lake created by damming the river at Weija just before it enters the sea. The rainfall pattern in the basin is bi-modal; the main rainy season extends from April/May to July and peaks in June. The minor rainy season occurs between September and November (Amoako et al., 2011; Fianko et al., 2009). Annual rainfall varies within the basin. In the southern part of the basin, the coastal plains, annual rainfall averages about 800-900 mm and approaches 1,600-1,700 mm in the northern part of the basin where the river system has its headwaters. Mean annual rainfall over the whole Densu Basin is 3,198 million m<sup>3</sup> of which 2,470 million m<sup>3</sup> (77%) is lost through evapotranspiration and 448 million m<sup>3</sup> (14%) infiltrates down to recharge groundwater leaving 280 million m<sup>3</sup> (9%) as surface water runoff (Adomako, et al., 2011; Karikari and Ansa-Asare, 2009).

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<sup>71</sup> The Weija Lake is a major source of water supply in Accra, the capital city of Ghana.



At the mouth of the Densu River is the Densu Delta Ramsar site (known as Sakumo I Lagoon and the Panbros Salt Pans) which forms one of the six internationally declared protected wetland areas (Ramsar sites) in Ghana.<sup>72</sup> The Densu Delta Ramsar site covers an area of 50 km<sup>2</sup> and comprises salt pans, flood plains and the lowest part of the Densu River catchment south of the Accra-Winneba road. It provides a sanctuary for migrating seashore birds. The birds utilise the lagoon as roosting and nesting grounds (Abrahams and Ampomah, 2011).

## 6.2.2 Freshwater Demand and Supply

The projected demand for surface water to fulfil the requirements of the whole Densu Basin in 2020 is 73.84 million m<sup>3</sup> per year (computed from Table 6.1). The average annual runoff of the Densu River (248 million m<sup>3</sup> per year as it enters the Weija Lake) is likely to reduce due to the effects of potential continued climate change. An assessment by the government in 2010 indicates an anticipated rise of 1 degree Celsius in Ghana's temperature and a reduction in rainfall and runoff (World Bank, 2010). Despite this, it appears that the surface water resources can cater for future requirements in the basin. However, the Densu River is the second biggest source of water supply for the Accra Metropolis. A considerable amount of water is abstracted and “exported” from the Densu Basin (Weija Lake) and used outside the basin in the Accra Metropolis (see also 7.2.1). As of 2007, the amount “exported” was 64.2 million m<sup>3</sup> per year.<sup>73</sup> The indication is that a general water-stressed<sup>74</sup> situation for the basin is gradually emerging.

**Table 6.1 Consumptive Water Demand Projections for the Densu Basin (million m<sup>3</sup> per year)**

User category	2010	2015	2020
Potable (domestic, industrial and institutional):			
- Urban population	41.2	59.7	80.8*
- Rural population (groundwater)	7.4	9.2	11.2
Agriculture			
- Irrigation (surface water)	4.5	6.0	7.5
- Livestock (surface water)	1.1	1.4	1.7
Industry (not served by urban piped water schemes but rely on own boreholes - groundwater)	3.3	4.8	6.5
Total for Densu Basin	57.5	81.1	107.7

\*It is assumed that 20% of urban settlements will be provided with pipe-borne facilities, which will be groundwater-based.

Source: Extracted from WRC (2007a).

<sup>72</sup> Protected areas managed within the guidelines laid in the International Convention on Wetlands agreed in 1971 in Ramsar, Iran and signed by Ghana in 1988 (MLF, 1999).

<sup>73</sup> Interview 13 (2009).

<sup>74</sup> Water stress is having per capita freshwater supply between 1,000 and 1,600 cubic meters per annum (Rijsberman, 2004; Larsen, 2004; Falkenmark, 1994). It could also mean demand for water exceeding the available amount during a certain period or when poor quality restricts its use (UNEP, nd).

A considerable reserve of groundwater is indicated to be available in the Densu Basin by a groundwater assessment study (WRC, 2008a). The study gives an estimated sustainable groundwater yield of 67.1 million m<sup>3</sup> per year. The total demand for groundwater in 2020 is estimated to be 33.9 million m<sup>3</sup> per year (computed from Table 6.1). Therefore, it appears that the basin's groundwater resources of 67.1 million m<sup>3</sup> per year are enough to sustain future abstractions.

The non-consumptive use of the Densu River is mainly fishing, which is intensive in the Weija Lake (see 8.3.2). There is no hydropower generation in the basin and no recreational activities have been developed yet on the river.

This section has shown that freshwater availability in the basin exists in the form of surface water, groundwater and rainfall. However, a general water-stressed situation is anticipated unless planning and management efforts are exerted to change the trend. This is due to the fact that rainfall and runoff are envisaged to decrease because of climate change and also as a result of increases in "exported" water from the basin.

### **6.3 Water Challenges in the Densu Basin**

#### **6.3.1 Water Pollution**

Water pollution is one of the main challenges facing water resource sustainability in the Densu Basin. The Densu River is polluted by human and agricultural waste in Ghana (Hagan et al., 2011; ISSER and IAS, 2003). The river experienced a gradual degradation in water quality for over 20 years<sup>75</sup> until 2005 when stakeholders initiated intervention activities in the basin.<sup>76</sup> The factors causing the degradation of the water are varying. These include human settlements, agricultural, commercial and industrial activities (Abrahams and Ampomah, 2011; Amoako et al., 2011; Tay and Kortatsi, 2008).<sup>77</sup> There was public concern over the quality of water supplied from the Weija Reservoir (which is downstream of the Densu River) in 2001. The concern resulted in a ban on farming activities along the Densu River by the Government of Ghana (Asamoah and Abagali, 2001).

The most significant sources of pollution from human settlements are inadequately treated or untreated human and solid wastes which are disposed off indiscriminately on land, in shallow pits and in some cases directly into streams or on the flood plains by individuals and the District Assemblies.<sup>78</sup> Leaching from waste dumps end up in the river system.<sup>79</sup> Decomposition of organic waste under anaerobic conditions in solid waste disposal sites, according to the IPCC (2006), leads to the formation of biogas consisting of approximately 50% methane. Methane is a greenhouse gas and is the second largest contributor to global warming after CO<sub>2</sub> (IPCC, 2007).

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<sup>75</sup> Interviews 3, 5, 13, 16 (2009).

<sup>76</sup> Interviews 1, 5 (2009).

<sup>77</sup> Interviews 5, 11, 12 (2009), 86 (2010).

<sup>78</sup> Interviews 12, 16, 19 (2009), FGD 23 (2010).

<sup>79</sup> Densu Basin Officer speaking on Voice of America English to Africa Service (18th September, 2008).

The waste dump for the New Juaben Municipal Assembly is upstream of the intake point of raw water pumped by the GWCL (urban water supplier). The site is close to the Suhyen stream, which joins the Densu River upstream. Waste from the municipality is dumped at the landfill site and a 'bull dozer' spreads the solid waste out. The liquid waste is dumped in an open excavator that has been created purposively for that. There is no treatment whatsoever, neither chemical nor physical. Both solid and liquid wastes are left to the open environment for natural decomposition to take place. The only bulldozer that moves the refuse and spreads them up breaks down frequently and even at the time of data collection it had broken down.<sup>80</sup>

Sanitary and waste disposal facilities are inadequate leading to disposal of domestic sewage and garbage into the river system. At Nsawam in the middle basin, much of the waste generated are disposed off in farms close to the river.<sup>81</sup> Until 2004, there was a large refuse dump that ended up in the Densu River at Nsawam. 'Night soil' carriers<sup>82</sup> were dumping human waste on the heap of refuse and directly into the river.<sup>83</sup>

The Oblogo dumping site used by the Accra Metropolitan Assembly (AMA) in the lower basin is a clear example of the source of pollution (see Photo 6.1). Residents of Oblogo complain about the stench and leachate from the dump when it rains.<sup>84</sup> The leachate gets into open gutters and even kills their domestic animals when the animals drink the leachate.<sup>85</sup>

Effluent discharge and accidental spills from industries are disposed directly into open drainage systems that empty into the river system. Agricultural pollutants mainly from the unchecked use of agro-chemicals such as fertilizers, pesticides and herbicides especially from pineapple and vegetable farms leach into the river (Karikari and Ansa-Asare, 2009).<sup>86</sup> A meaningful regulation policy is likely to help minimise possible externalities so that costs of groundwater pollution to future generations is reduced.

The undesirable and unauthorised fishing methods such as the use of poisonous chemicals and explosives by fishermen also cause pollution of the Weija Lake, reduce fish catch and loss of income.<sup>87</sup> The media reports on the indiscriminate activities of some fishermen. These fishermen use dead animals as bait for fishing which further pollutes the water.<sup>88</sup> The Station Chemist at the Weija treatment plant expressed worry at the rate of pollution of the Densu River. According to him, there is even the dumping of dead human bodies and investigations have revealed that some fishermen do this with the hope of catching

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<sup>80</sup> Author's observation (2009); interviews 5, 7 (2009).

<sup>81</sup> FGD 6 (2009).

<sup>82</sup> Night soil is a local term given to human excreta from pan latrine as it is collected at night by the carriers/collectors.

<sup>83</sup> Interview 32, FGD 13 (2009).

<sup>84</sup> FGD 16, interviews 78, 79 (2009).

<sup>85</sup> Interviews 5, 8, 12 (2009).

<sup>86</sup> Interviews 5, 12, 16 (2009).

<sup>87</sup> Interviews 5, 38, FGDs 4, 22, 23 (2009).

<sup>88</sup> Densu Basin Officer speaking on Voice of America English to Africa Service (18th September, 2008).

more fish. Police records as of 6th March 2008 indicate that 125 bodies had been retrieved from the lake.<sup>89</sup>



**Photo 6.1 Refuse Dump near the Weija Lake at Oblogo**

Source: Fieldwork (20-08-09).

Due to the collective impact of these adverse effects, the cost of treatment to make the Densu River water suitable for domestic and industrial use in the Accra area is one of the highest in the country (Awuku-Apaw, 2011; Alhassan, 2010).<sup>90</sup> The high cost of production due to the use of a lot of chemicals required for treatment because of high levels of pollutants has gained public attention (Esuon, 2006). There are complaints about the amount of chemicals that have to be used to treat the raw water from the Weija reservoir for human consumption. At times, the water works is forced by the high level of pollution to use more than the recommended dose of the treatment chemicals.<sup>91</sup>

### 6.3.2 Catchment Degradation

The interviews<sup>92</sup> indicated that economic activities that form livelihoods for inhabitants and non-inhabitants of the basin expose the catchment area to erosion and siltation of the rivers. The siltation often leads to flooding of farms and settlements. Land degradation as a result of over cultivation and use of certain farming methods (e.g. slash and burn) by farmers at the banks of the river compounds the erosion problem in the basin. In addition,

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<sup>89</sup>Ghana Broadcasting Corporation (GBC) (6th March, 2008) <http://gbcghana.com/news/18868detail.html>; and personal conversation with the officer-in-charge at GWCL, Nsawam (October, 2009).

<sup>90</sup> Interview 13 (2009).

<sup>91</sup> Interviews 3, 13, 38 (2009).

<sup>92</sup> Interviews 13, 16, 19 (2009).

illegal quarrying and sand winning remove the topsoil and destroy the land at the river basin. These findings confirm the observations made by Amoako et al. (2011); Afful et al. (2010) and Kusimi (2008a).

Forest cover is one of the ways of protecting water in terms of quality and quantity as well as preventing flooding and erosion (Hickey and Doran, 2004; Finger-Stich and Finger, 2003). However, in the Densu Basin indiscriminate harvesting of wood (lumbering) is a problem particularly at the source of the Densu through to the midstream (Kusimi, 2008b).<sup>93</sup> According to Abrahams and Ampomah (2011), the dense forest area in the Densu Basin had been reduced from 40 percent to 20 percent between 1990 and 2000. The area covered by semi-forest, scattered trees and scrubs, in contrast, had increased from 50 percent to 65 percent and bare areas as well as settlements and built-up areas had increased from 10 percent to 15 percent within the same period.

There is a socio-economic conflict between the government and the communities living at the fringes of the Atewa Forest Reserve where the Densu has its source. The land belongs to the local communities and they earn their living by depending on the land through farming and harvesting forest products. Since the area was converted to a forest reserve in the colonial era in 1935, there have been restrictions on the removal of forest resources. However, the communities still enjoy some communal rights including hunting and collection of non-timber forest products and have access to sacred places and hunting camps in the reserves (Forestry Commission, 2007). The communities at the fringes of the forest are allowed access to non-timber forest products such as mushrooms, snails and canes. A few are given a concession to harvest certain species or types of trees but this arrangement is abused. There are 'admitted' farms within the forest, however some of the people with 'admitted' farms, farm beyond their boundaries.<sup>94</sup> There is weak policy enforcement and illegal economic activities such as lumbering continue to cause land degradation.<sup>95</sup>

The traditional leaders, representatives of the communities, were consulted during the decision-making process that resulted in the creation of the forest reserve but did not take active part in the process.<sup>96</sup> The process, however, did not ensure equity; and power sharing was tilted against the communities. The instrumental approach was taken because the policy did not empower the communities. This is an example of decision-making that did not involve the communities actively to provide their opinions, ideas and preferences to bear on the decision taken. The decision-making process was hence not people-centred. The communities could not influence decisions that shaped their lives (Desai, 2008). The low level of participation (tokenism) has resulted in the Forestry Services Department experiencing implementation problems in keeping the forest from exploitation by the communities.<sup>97</sup>

There is low acceptance of decisions and low sense of ownership of decisions and responsibility for implementing the decisions by the communities and therefore low legitimacy (Von Korff et al., 2010; ADB, 2001). This shows that the level of intensity of

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<sup>93</sup> Interviews 2, 16 (2009).

<sup>94</sup> Interviews 5, 6 (2009); 83 (2010); FGDs 5, 11 (2009).

<sup>95</sup> Interviews 5, 19 (2008); Land Use Management Sub-Committee Meeting (2009).

<sup>96</sup> Interviews 56, 57, 59, FGD 5 (2009).

<sup>97</sup> Interviews 6 (2009), 83 (2010).

community participation in policymaking processes is important for the implementation of policies. As a result of the nature of the participation the people keep on entering the forest because they feel that their only source of livelihood has been taken away from them by some “strangers”.<sup>98</sup> This is an indication that the policymakers did not effectively assess the livelihood implications and, hence, could not proffer any alternative livelihoods for the communities when the forest reserve was created.

There is also land reclamation and encroachment for residential and industrial purposes within the buffer zones set by the GWCL around the Weija Lake downstream (Kusimi, 2008b).<sup>99</sup> Police posts, church prayer camps and road toll booths are some of the structures constructed close to the Weija Lake. The police and the Highway Authority are indirectly impinging on the Weija Lake. The road toll booths attract food vendors and as a result of their activities a lot of waste is generated which ends up in the lake thereby polluting the lake.<sup>100</sup> It remains a wonder how government agencies such as the police and the Highway Authority<sup>101</sup> found their way into the buffer zone. Interviews showed that the Highway Authority did not envisage that the toll would attract a large number of food vendors with their attendant filth. This also means that the police and the Highway Authority did not consult GWCL before putting up their structures.<sup>102</sup> This suggests weak interaction between public agencies.

### 6.3.3 Attitude Towards Water Resources Management

A major factor impeding water resources management and stakeholder participation in the basin is lack of awareness of environmental problems. There is a lack of awareness of the state of water resources in terms of availability and demand and in terms of environmental and management aspects relating to water use and protection.<sup>103</sup> There are basically two levels of awareness that affect stakeholder participation. One category of people is ignorant of the consequences of a polluted or drying up water body. For that reason, they see nothing wrong with throwing waste materials into the water bodies or engaging in activities that tend to destroy the vegetation protecting the water bodies.<sup>104</sup> Another category of people is aware of the dangers of water pollution and land degradation. Some of the second category of people remains incapable of solving the problem,<sup>105</sup> whilst others still engage in such activities as using poisonous chemicals for fishing;<sup>106</sup> sand winning and stone quarrying. Such persons are only concerned about the immediate economic benefit. Dimitrakopoulos et al. (2010) and Bulkeley and Mol (2003) observe that being conscious of the environment is a less important factor in making one participate actively in solving environmental problems. According to Cordano et al.

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<sup>98</sup> Interviews 5 (2009), 86 (2010); Land Use Management Sub-Committee Meeting (2009).

<sup>99</sup> Interviews 9, 13, 19 (2009).

<sup>100</sup> Authors observation (2009); Land Use Management Sub-Committee Meeting (2009).

<sup>101</sup> The Ghana Highway Authority is in charge of road toll booths.

<sup>102</sup> Interviews 1, 3, 5, 13 (2009).

<sup>103</sup> Interviews 19 (2009), 86 (2010), FGD 5 (2009).

<sup>104</sup> Interviews 52, 53 (2009).

<sup>105</sup> Interview 23, FGD 7 (2009).

<sup>106</sup> Interviews 7, 19, FGD 6 (2009).

(2004), environmental attitudes rather influence environmental behaviour. Their observation fits the second category of people.

Related to the attitude towards water resources management in the basin is non-payment of water use permits by several industrial and commercial users in the basin. The law, L.I. 1692 Water Use Regulations, 2001 requires water users to register and pay for water permits (see 5.5.2). The WRC and the Densu Basin office have not identified several of the water users yet. Others have been identified and approached and they are yet to register.<sup>107</sup> Registered water users as at the end of 2011 were thirteen (WRC, 2012b). Other water users refuse to pay because they do not see the reason why they have to register and pay for a water permit.<sup>108</sup> The quotes below are from two of the interviewees:

“I do not see the reason why WRC should ask us to pay water permit because we did our own feasibility studies [paid for the feasibility studies] on our own land. ... We do not hear much about WRC, for instance about payment of water permit; they do not educate us about their activities and what we are supposed to do or benefit. ... What I know about the water permit is after registration WRC gives you a water permit and your name will be published in the dailies. We do not know what the WRC does exactly to help us the water users so I do not see how payment of the water permit is going to help us”.<sup>109</sup>

“We have not been involved in taking decisions or making policies about water. The decisions are imposed on us. The WRC is imposing on us, producers of mineral water, to pay monies [water permit] for using underground water. Government should consult us about what their intentions are before implementing any policy. The WRC should be made to publish their accounts and they should maintain an open door policy”.<sup>110</sup>

Nationally, the WRC has been undertaking education programmes (see 5.5.2). There will be need to intensify the programme and target industrial and commercial users as well.

This section has dealt with issues regarding the ecological sustainability of the Densu Basin. The category of people with different levels of awareness has implications on catchment protection. Enforcement of policies is weak; this is demonstrated in non-compliance of laws because of low intensity of participation of communities in the creation of forest reserves as in the case of Atewa Forest Reserve.

#### **6.4 Stakeholder Participation in Addressing Water Challenges**

This section examines the roles different stakeholders play in activities geared towards sustaining water resources in the Densu Basin. It does this within the framework of the complex ladder of stakeholder participation discussed under subsection 2.5.8 and Figure 2.3. The complex ladder integrates the different levels of intensity of stakeholder participation with the goals and principles of stakeholder participation and the different approaches to participation. The composition and functions of Densu Basin Board (DBB) is discussed first under subsection 6.4.1.

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<sup>107</sup> Interview 5 follow-up (2011).

<sup>108</sup> Interviews 25, 26, 27 (2009).

<sup>109</sup> Interview 26 (2009).

<sup>110</sup> Interview 27 (2009).

#### 6.4.1 Densu Basin Board

The underlying principle of water resources management contributing to good governance<sup>111</sup> in the national water policy that relates to participation is the principle of “subsidiarity in order to ensure participatory decision-making at the lowest appropriate level in society” (MWRWH, 2007: 14). As such, an important aspect of the WRC’s work is to transfer certain water resources management functions to a decentralised level with the river basin as the geographical area of focus. In addition, there is a move from sectoral to integrated management approaches. River basin boards are the inter-assembly and inter-sectoral structures for managing entire river basins in Ghana. These are being piloted in three selected basins – Densu, White Volta and Ankobra basins.<sup>112</sup> The fourth and fifth basin boards, the Pra and Tano Basin Boards, were inaugurated in 2011.<sup>113</sup> The WRC aims at targeting initiatives towards the protection and management of the river basins.

The Water Resources Commission established and officially inaugurated the Densu Basin Board in March 2004 as a decentralised river basin coordination and management structure that performs assigned tasks on behalf of the WRC. The Board was reconstituted in 2007 and then in 2011. The Board has a legal existence; its establishment is in pursuance of the functions and mandate of the WRC as enshrined in Section 7 of the Water Resources Commission Act 522, 1996. It is also supported by operational guidelines developed by the WRC (WRC, 2011c; WRC, 2007b). The Board has the objective of protecting water resources in the Densu River Basin. The functions of the Board are similar to the functions of WRC (see 5.5.2) but with specific reference to the Densu Basin.

The Board brings together government stakeholders from relevant agencies including the District Assemblies (DAs) whose area of jurisdiction covers the greater part of the basin by representation on the Board. The sectors/government agencies represented on the Board have their mandate covering issues regarding water management in the Densu Basin. In addition, the selection is based on the water resources management problems faced in the basin which are mainly pollution from improper waste management; land degradation and the need for awareness creation. NGOs and traditional authorities are represented as well (WRC, 2011c; 2007b).<sup>114</sup> The composition is made up of:

- a) A chairperson appointed by the WRC in consultation with relevant stakeholders;
- b) A Representative of the WRC;
- c) The Densu Basin Officer who is in charge of the Densu Basin secretariat and a secretary to the Board;
- d) One person representing each of the following: East Akim Municipal Assembly; Suhum-Kraboia-Coaltar District Assembly; New Juaben Municipal Assembly; Ga West Municipal Assembly; Ga South Municipal Assembly; and Akwapim South

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<sup>111</sup> Good governance is one of the goals of participation and a focus area of water resources management in the National Water Policy.

<sup>112</sup> Interviews 1, 5 (2009), 84 (2010).

<sup>113</sup> Interviews 1, 5 follow-up (2011).

<sup>114</sup> Interviews 1, 5 (2009).



- e) Municipal Assembly. Also one representation of Eastern Regional Coordinating Council; Ghana Water Company Limited (potable water supplier to urban areas); Ministry of Food and Agriculture (MOFA); Environmental Protection Agency (EPA), Eastern Region; Forest Services Division (FSD) (of Forestry Commission), ER; Ministry of Health, ER; Department of Women, ER (women representation); and National Commission on Culture, ER; Eastern Regional House of Chiefs. One person also represents the Ghana Association of Private Voluntary Organisations in Development (GAPVOD), an umbrella of developmental NGOs (WRC, 2011c; WRC, 2007b).<sup>115</sup> The number of Board members was increased by one in 2011. A representative of the Ga South Municipal Assembly that was carved out of Ga West Municipal Assembly in 2008 became a member in 2011.<sup>116</sup>

The chairperson is the Acting Executive Secretary (AES) of the WRC who doubles up as the representative of the WRC. The Chief Economic Planning Officer represents the Eastern Regional Coordinating Council, which oversees the District Assemblies in the Eastern Region. Environmental Health and Sanitation Officers represent three of the DAs; and assembly members represent two other DAs. A District Chief Executive who hardly finds time to attend board and other meetings represents the sixth DA.<sup>117</sup> The communities in the basin are supposed to be represented by the sub-district structures through the District Assemblies on the Board but the sub-district structures are either not functioning or are not in existence (see Section 4.4) rendering the link between the DAs and the communities weak.

Figure 6.1 illustrates incorporation of stakeholder participation in the Densu Basin Board. The Board is a decision-making body, and from the participation literature all those affected or who can influence decisions are to be included (inclusiveness) (Reed, 2008; Bekbolotov, 2007; Hampton, 1999) (see subsection 2.5.3). The composition of the Board shows that the Community Water and Sanitation Agency (CWSA), which is also a key agency in the supply of potable water to rural areas in the basin is missing out (see Figure 6.1). Water users from the private sector are not represented on the Board. The government is in the majority. Of the 18 members of the board, only two are not from government agencies. The two represent NGOs and the traditional authorities (the public and communities). The representation of women is by a government agency, Department of Women of the Ministry of Women and Children's Affairs. (WRC, 2011c; 2007b).<sup>118</sup> This gives rise to under-representation of and exclusion of some relevant groups and it may tilt decisions in favour of the government.

It is difficult and practically impossible for the WRC to maintain and deal with or handle a large number of participants on the board. It is not possible to have meaningful discussions or deliberative sessions with a large number of participants. Resources are limited. For instance, WRC pays sitting and travelling allowances to the Board members and it will be difficult to do the same for a large number of participants.<sup>119</sup> The amount paid has to be motivating enough for members to render their services. Though money is

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<sup>115</sup> Interviews 1, 5 (2009).

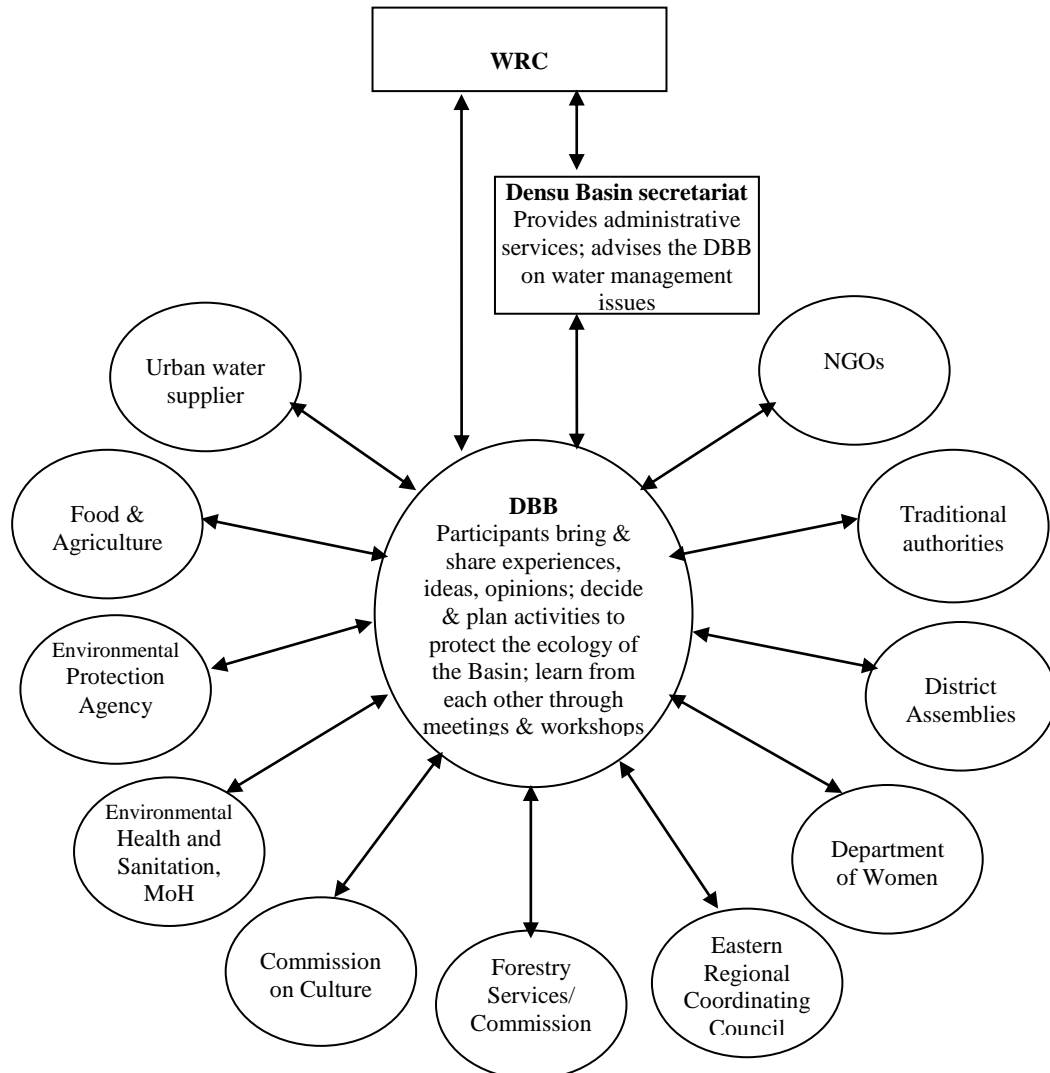
<sup>116</sup> Interviews 1, 5 follow-up (2011).

<sup>117</sup> Author's observation from DBB records (2009).

<sup>118</sup> Author's observation from DBB records (2011, 2009).

<sup>119</sup> Interviews 1, 5 (2009).

not the only motivation to participate, it is a major one. This illustrates one of the difficulties in ensuring inclusiveness (see 2.5.3). Resource constraints therefore put limitations on ensuring inclusiveness as it has been observed earlier by Funke et al. (2007).<sup>120</sup>



**Figure 6.1 Incorporation of Stakeholder Participation in the Densu Basin Board**

The work of the Densu Basin Board is facilitated by a secretariat as a decentralised entity of the WRC. The secretariat advises the DBB on water management issues and makes sure that the DBB's decisions are in line with the general principles, water plans and specific objectives of the WRC. The DBB holds meetings to prepare and prioritise water action plans and engages in the allocation of water user rights.<sup>121</sup>

The DBB has four sub-committees that undertake different tasks. Their responsibilities reflect the focus of the Board. The main challenges in the basin constitute the focus of the Board, which also informs the number and types of committees. The committees are:

<sup>120</sup> Interviews 2, 3, 5, 29 (2009).

<sup>121</sup> Interviews 5, 29, 30 (2009).

Waste Management Sub-Committee; Land use Management Sub-Committee; Awareness Creation Sub-Committee; and Programme and Budget Sub-Committee. Each sub-committee meets to plan activities based on its responsibilities along with a budget for the year and then reports at Board meetings. Reports are sent to the WRC. After approval by WRC, the relevant stakeholders are contacted for implementation. The District Assemblies (DAs) are the implementers of most of the decisions taken by the board. The DBB, though is a decentralised unit of the WRC, it has to undertake assigned tasks from and for the WRC. The decisions it takes are also subject to approval by the WRC.<sup>122</sup>

The governance arrangement between the WRC and the DBB is a mixture of a top-down and bottom-up system. The WRC assigns tasks and transfers decision-making authority and responsibility to the DBB. The DBB in turn is accountable to the WRC (refer to 2.4.3).

The decentralised unit of the WRC, the Densu Basin Board (DBB), lays emphasis on participation of government agencies and NGOs in water resource management at the basin level. The Board collaborates with NGOs especially in awareness creation (see 6.4.4). The environmental problems associated with the lower basin, the Ga West and South Districts in terms of water pollution among others is of a bigger magnitude compared to the rest of the basin. This emanates from the exceptionally high population growth rate of the districts due to rural-urban migration and the proximity of the districts to the Accra Metro area. These two districts are therefore marked as 'hot spots' by the WRC and the DBB.<sup>123</sup>

The active involvement of the Board members in planning activities to protect water resources in the basin makes their participation high on the complex ladder of participation. The representatives of collaborative government agencies including the member representing women, and representatives of NGOs and traditional authorities through deliberations contribute and share experiences, ideas and opinions in making decisions. They develop action plans to protect the ecology of the basin together and in the process learn from each other. The stakeholders on the Board participate intensively in decision-making processes concerning activities aimed at ecological sustainability of the basin. These take place in the context of meetings and workshops.

#### 6.4.2 Stakeholder Participation in Addressing Water Pollution Challenges

This section deals with stakeholder participation in activities that attempt to reduce water pollution in the Densu Basin at both the basin and community levels. Several actors come into play in addressing water pollution challenges. These include (a) the WRC/DBB and the DBB Waste Management Sub-Committee (b) District Assemblies (DAs) and the DAs' waste management departments; (c) NGOs (d) EPA; (e) GWCL; (f) community leaders (Assembly persons, chiefs and elders) (g) CBOs; and (h) households.

The Densu Basin Board Waste Management Sub-Committee prepares action plans to manage urban waste in particular to reduce water pollution for the Board. Members of the sub-committee are representatives of agencies with interest in waste management. They are: the Municipal Environmental Health and Sanitation Officers of Ga West, Ga South

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<sup>122</sup> Interviews 5, 7, 8, 9 (2009).

<sup>123</sup> Interviews 1, 3, 5, 8, 19 (2009).

and New Juaben Municipal Assemblies; the representative of Akwapim South Municipal Assembly; the Assistant Chief Environmental Health and Sanitation Officer of Ministry of Health, ER; the Regional Director of EPA, ER; the Chief Manager, Water Quality Assurance of GWCL; and the Densu Basin Officer.<sup>124</sup>

The District Assemblies are in charge of waste management in the districts and they carry out decisions of the DBB regarding waste management. The law (Local Government Law, Act 462, 1993) mandates District Assemblies to be responsible for the management of the environment. There is also the policy to strengthen the District Assemblies to assume a central role in supporting communities in maintaining the integrity of aquatic ecosystems through the effective management of water and sanitation facilities (MWRWH, 2007).

To address the problem of dumping human excreta collected from pan latrines into rivers, the use of pan latrines is phased out and the construction of new ones is banned as well by the government and DAs. The New Juaben Municipal Assembly financially supports house owners to replace pan latrines with water closets with amounts between GH¢100 and GH¢250.<sup>125</sup>

The DBB approached All Nations University in Koforidua in 2011 to assist in addressing the leachate problems at landfill sites. The University, upon this request is collaborating with the New Juaben Municipal Assembly in developing waste management technologies.<sup>126</sup> The DAs carry out the decisions of the DBB by relocating and evacuating their waste dumps away from water bodies. A monitoring team comprising the police, WRC and the Environmental Health Officer of Ewutu-Efutu-Senya District managed to get the Ewutu-Efutu-Senya District Assembly to move a refuse dump, which it had deposited close to the Weija dam at Amezokokpe away within six months.<sup>127</sup> The Akwapim South Municipal Assembly in collaboration with the Ministry of Local Government and Rural Development evacuated a huge heap of refuse along the banks of the Densu River at Nsawam.<sup>128</sup> The New Juaben Municipal Assembly acquired a new site, which is far from water bodies to relocate its dumping site in compliance with the decision of the Densu Basin Board.<sup>129</sup> The implication of this is that there exist a healthy cooperation between the DAs and the DBB in waste management in attempt to reduce water pollution.

Natural resources management related policies including water require the knowledge, experience and opinions of local communities who are the key stakeholders in resource conservation and this is ensured through public/community participation (Dungumaro and Madulu, 2003). However, some writers question the effectiveness of local knowledge in a modern world (Briggs and Sharp, 2004; Forsyth, 2003; Krupnik and Jolly, 2002). They argue that we need to pause and ask about the quality of ideas and methods represented as indigenous knowledge before using it. This, notwithstanding, the experience and

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<sup>124</sup> File on Waste Management Sub-Committee, Densu Basin Secretariat.

<sup>125</sup> Interviews 89, 90 (2010); Exchange rate of the Ghana cedi is GH¢1.90 to US\$1.00 (2012).

<sup>126</sup> Interviews 5, 89 follow-up (2011); conversation with Assistant Densu Basin Officer (2011).

<sup>127</sup> Interviews 1, 5, (2009).

<sup>128</sup> Interviews 5, 16, 31, 32 (2009).

<sup>129</sup> Interviews 5, 7 (2009); Basin Board meeting 2nd quarter, 2009.

ideas/opinions of indigenes give profitable insights into issues (see Reed et al., 2008; Fraser et al., 2006 and chapter 3).

As part of the Water for African Cities (WAC) II project sponsored by the United Nations Centre for Human Settlement (UNCHS) (Habitat)<sup>130</sup> the WRC first organised sensitisation programmes for the communities around the Weija Lake and invited the GWCL and the Weija Lake Protection Association (WLPA)<sup>131</sup> to the programme.<sup>132</sup> The WRC involved the representatives of the communities (the chiefs and their elders and the assembly members of the communities), the WLPA as well as the Ga West/South Municipal Assembly, GWCL and the parliamentary select committee in coming up with decisions as to what to do to reduce pollution from dumping of liquid and solid waste into the lake. As a result of the co-knowledge produced the stakeholders agreed to provide sanitation facilities (waste bins and toilet facilities) to communities in the lower basin around the Weija Lake. The facilities were: covered waste containers in every home; water closets for selected homes in four communities around the Weija Lake; and Kumasi Ventilated Improved Pits (KVIPs)<sup>133</sup> for communal use.<sup>134</sup>

At the consultation stage, the representatives of the communities agreed that the beneficiary households provide labour in excavating the septic tanks. The various stakeholders decided that the Municipal Assembly ensures that all new buildings that are put up have toilet facilities. The engagement took a form of discussion in a meeting context.<sup>135</sup> Since the opinion leaders had regular meetings with their communities and discussed and reported on these issues the primary stakeholders (the communities) participated indirectly by representation.<sup>136</sup> Implementation was by WRC in partnership with the Waste Management Department of the Ga West Municipal Assembly.<sup>137</sup> The project took two years from 2008 to 2010.<sup>138</sup>

The participatory processes used in this project demonstrate how multi-stakeholder groups engagement can contribute to problem solving. The use of local and expert knowledge to arrive at environmental solutions reflect what is reported in the literature regarding environmental assessment in dry land (Whitfield et al., 2011); research on identification of locally appropriate indicators of dry land system health (Bautista et al., 2009); and identification of sustainable environmental indicators (Fraser et al. 2006; Reed and Dougill 2002).

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<sup>130</sup> The UNCHS (Habitat) has a project for supporting African cities. The objectives are to improve urban water resources management practices in African cities by enhancing awareness, promoting effective policies, programmes and investments at city level and in key national and regional institutions (UN HABITAT, 2003).

<sup>131</sup> WLPA is a community-based association at Weija whose main focus is on protecting the Weija Lake (interview 38 (2009), FGD 4 (2009)).

<sup>132</sup> Interviews 1, 5, 13, 38, 76, 79 (2009).

<sup>133</sup> Kumasi Ventilation Improved Pit (KVIP) is a pair of pit latrines dug side by side when the first one gets full the second one is used; and by the time the second one gets full the first would have had time to decompose and ready to be reused.

<sup>134</sup> Interviews 1, 5, 12, 30, 38, 76 (2009), FGDs 4, 16 (2009).

<sup>135</sup> Interviews 5, 12, 13, 30, 76 (2009), FGD 16 (2009).

<sup>136</sup> Interviews 38, 76, 77, 80 (2009), FGD 16 (2009).

<sup>137</sup> Interviews 1, 5, 30, 38, 76 (2009).

<sup>138</sup> Interview 5 follow-up (2011).

The (indirect) involvement of the communities was in line with one of the basic principles of the water policy of Ghana (subsidiarity in order to ensure participatory decision-making at the lowest appropriate level in society - see Box 5.1). The involvement of the affected stakeholders empowered them to have a say in the decision, which as well enhanced democracy. The involvement was also intensive (see 2.5.7). The intensity is reflected in the active involvement of the affected stakeholders in the decision-making process, which took the form of a dialogue between the authorities and the stakeholders.

Three types of knowledge – scientific, bureaucratic and stakeholder knowledge as identified by Edelenbos et al. (2011) and Rinaudo and Garin (2005) were at play in the decision-making process. Though this development is noted to be common in the developed countries (Edelenbos et al., 2011; Pielke, 2007), these findings seem to suggest it can take place in a developing country. However, the extent of benefiting from the hybridisation of the three types of knowledge was limited. This was influenced by the limited effect of the project in reducing pollution in the lake as a result of the facilities being “woefully inadequate as only four out of the eight communities around the lake benefited. Only two households in each of the four selected communities benefited from the constructed water closets”.<sup>139</sup>

Other actors involved in protecting water resources against pollution are the NGOs. One such NGO is the Global Organisation for Fundamental Aid (GOFA), which engages communities in activities to protect water resources in the middle basin of the Densu. One of GOFA’s main concerns is that the Densu River stays alive and pollution free.<sup>140</sup> It hires swimmers with their canoes to clear water weeds from a reservoir at the intake point of the GWCL water works at Ntoaso, which supplies water to Nsawam and its environs. These swimmers are members from the communities around Ntoaso. They regard this as an economic engagement hence they are motivated by an immediate economic gain.<sup>141</sup> However, such economic benefits are not sustainable.<sup>142</sup> The situation where GOFA engages stakeholders to achieve the objective of the project, which is to save the Densu River from being degraded, is akin to the instrumental approach discussed by Neef (2008) (see 2.5.5). The success of the project was short-lived because the swimmers were not adequately involved in the design of the project. Consequently, the swimmers did not own the project - an indication of ineffective participation.

However, the swimmers are economically empowered over the short period that they are engaged. An approach that may stimulate community collective interest in the protection of the water resource is likely to generate initiatives in the protection of water resources. The people are likely to involve themselves in a group action to protect the resource. The removal of water weeds from water bodies is known to have positive influence on fish production. Hence, the communities that are known to be engaged in fishing<sup>143</sup> stand to benefit from GOFA’s activities. GOFAs activities may lead to a sustainable protection of resources if the communities become knowledgeable in this respect.

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<sup>139</sup> Interview 5 follow-up (2011).

<sup>140</sup> Interview 16 (2009).

<sup>141</sup> Interviews 16, 32 (2009).

<sup>142</sup> Interview 16 (2009).

<sup>143</sup> Interviews 60, 62 (2009).

Table 6.2 shows the intensity of stakeholder participation in the different activities in both decision-making and implementation processes. See also Figure 6.2 below for the illustration of participatory processes in protecting water resources and the interaction between actors in the Densu Basin.

**Table 6.2 Intensity of Stakeholder Participation in Activities Addressing Water Pollution Challenges**

Activity	Decision-making/ implementation	Stakeholder	Role/approach	Intensity/ empowerment
Addressing dumping of human excreta into rivers	Decision-making	Government (MLGRD)	Initiated the ban on construction & use of pan latrines	Intensive
	Implementation	DAs	Banned construction & use of pan latrines. Supports house owners to replace pan latrines	Less intensive
Relocating & evacuation of waste dumps away from water bodies	Decision-making	DBB Waste Management Sub-committee	Prepares action plans to manage urban waste	Intensive
		WRC and the EHS officer	Initiated the movement of refuse dump	Intensive
	Implementation	DAs	Relocated & evacuated waste dumps away from water bodies. Moved refuse dump away from Weija dam	Less intensive
WAC II project	Decision-making (planning)	UNCHS/WRC	Initiated the project	Intensive
		DA, government agencies	Identified problem & took decision.	Intensive
		Community leaders, WLPA	Transformative approach	Intensive. Empowered
	Implementation	UNCHS	Provided funds	Intensive
		WRC/DA	Supervised	Intensive
		DA/Assembly member	Selected beneficiaries	Intensive
		Communities	Provided labour Instrumental approach	Tokenism, poorly empowered
Clearing of water weeds to protect reservoir of water supply	Decision-making	GOFA	Initiated project	Intensive
	Implementation	GOFA	Mobilised communities	Intensive
		Swimmers (communities)	Provided skilled labour Instrumental approach	Tokenism but economically empowered
De-silting & clearing weeds around small rivers	Decision-making	Traditional authorities	Initiated activities Transformative approach	Intensive. Empowered
	Implementation	Communities	Provided communal labour Instrumental approach	Less intensive. Fairly empowered

Key: DA = District Assemblies; DBB = Densu Basin Board; EHS = Environmental Health & Sanitation; GOFA = Global Organisation for Fundamental Aid; MLGRD = Ministry of Local Government and Rural Development; UNCHS = United Nations Centre for Human Settlement (UN Habitat); WACII = Water for African Cities II; WLPA = Weija Lake Protection Association; WRC = Water Resources Commission.

GOFA constructed an incinerator for the government hospital at Nsawam in 2005. Prior to that date, the hospital was dumping hospital waste in the open; and theatre wastes, including human parts, were buried in shallow graves under a tree near the hospital. During the rainy seasons, the wastes were washed into a stream that joins the Densu.<sup>144</sup>

<sup>144</sup> Interview 16 (2009).

GOFA receives funding from WRC and the European Union micro-finance for some of its activities.<sup>145</sup> This has reduced the pollution of water resources from improper disposal of hospital waste.<sup>146</sup>

There are indigenous ways of protecting water resources at the community level through customary practices and laws (see 5.4.1 and 8.2). Usually the initiative to protect water resources comes from the communities (leaders) to meet locally felt needs and priorities. In such instances, the communities' traditional authorities organise communal labour often on "rest days" to de-silt the streams before the rainy seasons to make room for more volumes of water hence preventing or reducing flooding. In addition, there are bye-laws that do not allow dumping of refuse into water bodies and felling of trees along the river banks<sup>147</sup> (see Box 8.1 in Chapter 8 for more rules).

At Kibi Apapam, there is compliance and the people still observe customary laws; this is because the traditional authority has a strong leadership, the chief commands a lot of respect. The people therefore own the initiative and hence comply with the bye-laws that protect the resource.<sup>148</sup> The people participate actively and indirectly in decision-making processes through their leaders, and their participation is intensive. The transformative approach to participation is applied in the indigenous ways of protecting water resources because the communities have decision-making autonomy through their leaders (Oakley 1991); the participatory processes are transparent and there is legitimacy.<sup>149</sup>

Key actors at the basin level with respect to waste management are the DBB, the District Assemblies and NGOs (GOFA). At the community level, participation takes the form of a project with an international collaboration between WRC and UN Habitat. Key stakeholders in the decision-making processes are – the WRC, the urban water supplier (GWCL), the DA, community-based association (WLPA), representatives of the communities (the chiefs and elders of the villages and the assembly persons). Implementation is by WRC in partnership with the DA and beneficiary households. The extent of community participation in the WAC II project is intensive as they take part in coming up with solutions in reducing pollution. Participation of primary stakeholders was intensive where they were involved in decision-making processes or where they initiated the activities, hence, different activities have different levels of stakeholder involvement.

#### 6.4.3 Stakeholder Participation in Addressing Catchment Degradation Challenges

The Densu Basin Board Land Use Management Sub-Committee oversees the development of action plans to bring about improvement in land and water resources management. The objective is to reduce land and water resources degradation and sustain livelihoods. This sub-committee comprises representatives of agencies with interest in catchment degradation and land use management. These are: the Forest Services

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<sup>145</sup> Interviews 5, 16 (2009).

<sup>146</sup> Interviews 7, 16 (2009).

<sup>147</sup> FGDs 10, 15, 17 (2009).

<sup>148</sup> FGDs 5, 11 (2009) and author's observation (2009).

<sup>149</sup> Interviews 61, 62, 77 (2009), FGD 7 (2009).



Division; Land and Water Management Project, MOFA; Eastern Regional Coordinating Council; East Akim Municipal Assembly;<sup>150</sup> and the Densu Basin Office.<sup>151</sup>

The Densu Basin Board collaborates with the Agricultural Extension Services (AES) of the Ministry of Agriculture (MOFA) and the Forestry Services in different ways in curbing catchment degradation. The AES teaches farmers farming methods that limit exposure of top soil to direct rain and subsequent runoff in order to reduce land degradation but not all farmers are covered due to shortage of extension staff.<sup>152</sup>

The Forestry department concerns itself with protecting the Atewa Forest Reserve where the Densu River takes its source. This involves preventing illegal activities (e.g. illegal lumbering and extending farms beyond the boundary) from taking place in the reserve. However, they do not have enough forestry guards to guard the forest. They are understaffed and financially constrained and as such control and enforcement of law is weak.<sup>153</sup>

The catchment degradation is pronounced in the urban settlements. This is because of encroachment of buffer zones around the water body for residential purposes. The laws established to mitigate the impact of land degradation as a result of encroachment by various administrations are not adhered to due to political interference. With the help of security agencies, particularly the police, the WRC demolished unauthorised structures that were threats to the Weija Lake dam in 2007. WRC sent out enforcement notices before the demolishing exercise was started. However, some of the owners of the structures contacted political figures who requested the exercise to be stopped.<sup>154</sup>

The Ministry of Environment, Science and Technology (MEST) initiated the Weija Lake Afforestation Project where fast growing and hardy tree species were planted along the banks on the Weija Lake. The project was sponsored by the British American Tobacco Ghana (a private company). The purpose of the project, according to the Deputy Minister of the MEST, was to protect the Weija Lake and the environment. The British American Tobacco Company, Ghana engaged an NGO, Trees for the Future, to plant about 4 million seedlings. The NGO, in turn, employed people from and outside the local communities around the Weija Lake to plant the tree seedlings and care for them. The exercise was undertaken with technical support from Ghana Water Company Limited (GWCL), the Ghana Irrigation Development Authority (GIDA) and the Environmental Protection Agency (EPA).<sup>155</sup> The implementation of this project demonstrates a multi-actor participation. All these activities are coordinated by the WRC. These agencies have been involved in the decision-making processes. Figure 6.2 illustrates participatory processes in protecting water resources (reducing land degradation and water pollution) and the interaction between actors in the Densu Basin.

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<sup>150</sup> East Akyem District is in the upper reaches of the Densu River where there is a lot of lumbering and farming activities.

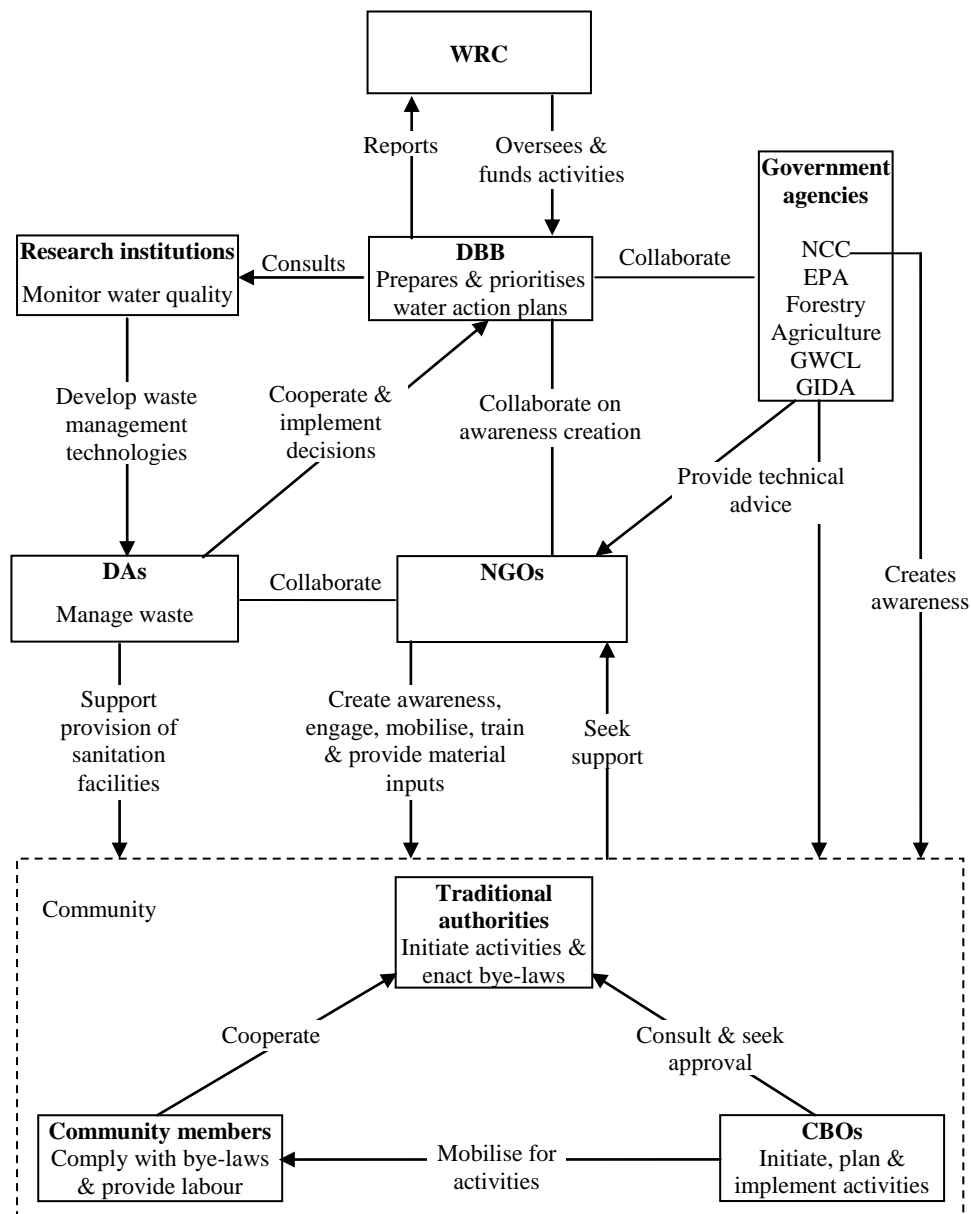
<sup>151</sup> File on Land Use Management Sub-Committee, Densu Basin Secretariat.

<sup>152</sup> Interview 2 (2009); Land Use Management Sub-Committee meeting (2009).

<sup>153</sup> Interview 6 (2009); Land Use Management Sub-Committee meeting (2009).

<sup>154</sup> Interview 5 (2009); 1st Quarter Densu Basin Board meeting (2009).

<sup>155</sup> Interviews 1, 5, 4, 13 (2009), 81 (2010).



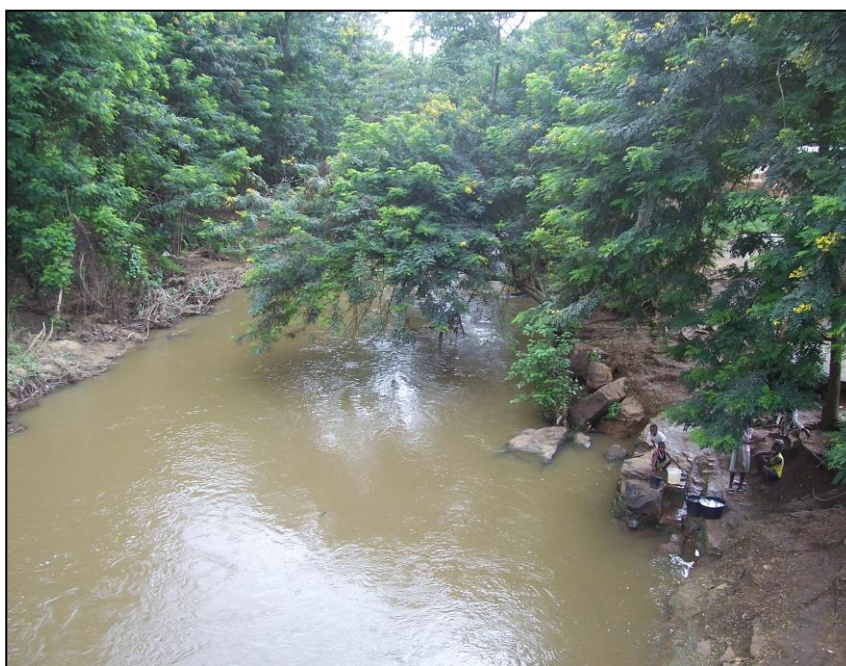
**Figure 6.2 Interactions and Participatory Processes of Stakeholders in Protecting Water Resource in the Densu Basin**

There are few community-based organisations (CBOs) in the Densu Basin whose activities are focused on protection of water resources. Some are involved in tree planting in the basin. They take their own initiatives and receive help from organisations outside the community. Okyeman Community Environmental Protection Brigade (OCEPB) and Community Biodiversity Advisory Group (CBAG) based at Kibi Apapam are some of such CBOs. The OCEPB receives free seedlings, boots, uniforms and other inputs from the Okyehene Environmental Foundation (OEF).<sup>156</sup> This is because the policies of OCEPB support the policies of the OEF. The OCEPB together with CBAG do spot

<sup>156</sup> FGDs 5, 11 (2009).

planting of trees in the Atewa forest where there are open spaces. They consult and seek approval of the local chiefs before they undertake any activity in an area.<sup>157</sup> Members of these CBOs are engaged in decision-making as they take their own initiatives. Their involvement in decision-making is intensive because they initiate, plan and implement their own decisions. They tend to learn and improve their capacities; hence, they are empowered (see Table 6.4 under Section 6.5 below). Thus, the participatory processes contribute to the strengthening and supporting of the capacity building of CBOs, which in turn improves local participation in basin protection activities.

The Adventist Development and Relief Agency (ADRA)-Ghana ran two projects in the Densu Basin: tree planting along the banks of the Densu River and establishment of fruit and tree crop plantations on individual lands. (See Photo 6.2 for trees planted along the Densu River). The two projects occurred concurrently. In the first project (1997-2003), volunteers from the communities were put into groups of 60 and had leaders amongst them. ADRA provided tree seedlings and food-for-work for people who participated in the tree planting and monitored the project to ensure its success. The communities engaged include Densuano and Akwadum in the New Juaben Municipality.<sup>158</sup> This first project was extended to the Ga West District where ADRA-Ghana assisted 45 communities along the Densu River to plant tree seedlings to reforestate the banks of the river. One of the communities is Afuaman.<sup>159</sup>



**Photo 6.2 Portion of the Densu River at Akwadum Showing Trees that ADRA Mobilised Local People to Plant**

Source: Fieldwork (18-09-09).

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<sup>157</sup> Interview 55 (2009), FGDs 5, 11 (2009).

<sup>158</sup> Interviews 5, 17, 43, 44, 46 (2009), FGDs 17, 18 (2009).

<sup>159</sup> Interview 17 (2009), FGD 14 (2009).

In the second project (2003), ADRA-Ghana assisted groups of farmers in the Densu Basin to establish tree and fruit crop plantations in the Densuso area in the Suhum-Krabo-Coaltar District. The farmers were put into groups of 20 to 25. The farmers received training on how to plant and care for trees. The farmers received tree crop or fruit crop seedlings from ADRA on loan. They intercropped with food crops in the initial stage; and sold the food crops to pay off the loans. They established the plantations for commercial purposes. The farmers who received training have been empowered economically. The fruit crops are harvested and sold and the tree crops are harvested for firewood and charcoal and sold. They have had their livelihoods improved.<sup>160</sup> The economic empowerment of those who were given food-for-work could not be sustained after the project ended.

The Global Organisation for Fundamental Aid (GOFA) organised volunteers from Adoagyiri and Nsawam in the Akwapim South Municipality for a tree planting exercise on weekends between 2001 and 2005. The volunteer groups were CBOs – youth groups such as the Porters Hand contributed labour. GOFA gave the volunteer groups food-for-work. GOFA obtained seedlings from the forestry department and funding from WRC.<sup>161</sup> This project could not be sustained because of inadequate funding for feeding the volunteers and for obtaining seedlings. The WRC ceased funding GOFA because of poor accountability on the side of GOFA.<sup>162</sup>

Friends of Rivers and Water Bodies (FRWB) is another NGO that operates within the Densu Basin. It recruits and pays people from communities to plant trees. It supplies the participants with materials including boots, uniforms, cutlasses, and seedlings.<sup>163</sup> This approach is found to last as long as the supplies last; it did not go beyond the pulling out of the NGO.

Local people are motivated to participate by economic incentives; they do not see the protection of the resource as a need. Participation occurred in the form of input or contribution (often labour) into the projects, attending meetings/forums and training programmes. The people's participation was directly linked to an immediate material and economic benefit (ADRA and GOFA food-for-work and wages from FRWB and Trees for the Future). On incentives to sustain people's involvement such as the ADRA farmers (those with established tree or fruit tree plantations), their motivation to participate was linked to having a sustained economic benefit – a livelihood. The participation by the community members is explained by the rational choice theory discussed in Section 2.5 (Scott, 2000). The community members exchange their labour and time for economic and material benefits. Obviously, this is an indication of a society that is concerned with immediate needs, a feature common with poor people.

Ong'or (2005) observes that community participation may take different forms. It could be in the form of discussions or open forums between community members themselves and other stakeholders. The other stakeholders may be from government authorities or non-governmental organisations involved in water management. The output from such engagements may serve as inputs in policy formulation or change in operational

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<sup>160</sup> Interviews 5, 17 (2009), 101, 104 (2010), FGD 26 (2010).

<sup>161</sup> Interview 16 (2009), FGD 6 (2009).

<sup>162</sup> Interview 5 (2009).

<sup>163</sup> FGD 5 (2009), interview 86 (2010).

strategies. This facilitates implementation of water management decisions. However, engagement of communities by government authorities or NGOs in the Densu Basin has mainly been in the implementation stages of projects and communities are hardly involved in decision-making. Such forms of involvement (contribution of labour, materials or money towards predetermined projects) are considered as a very low form of participation (Prokopy, 2005). The intensity of participation by the communities is therefore at the level of tokenism. It is similar to the contractual mode of participation described by Barreteau et al. (2010) as the NGOs have the sole decision-making power over most of the decisions taken in the process. The communities participate in activities defined by the NGOs by being “contracted” to provide services and support. The relationship between the two parties (communities on one side and government authorities or NGOs on the other side) shows power differentials.

However, where initiatives are from the communities such as CBO’s initiated projects, communities are engaged in decision-making processes and participation is intensive (see Table 6.4 and Figure 6.3 under Section 6.5). Prokopy (2005: 1802) also considers participation of this nature - where “participants undertake their own initiatives, develop strong leadership roles, and are in full control of their project” - to be high.

It is observed (Osti, 2004) that external agencies play a dominant role in emergencies and post-event preparations in flood disasters but community participation may have little to do with sustainability. With regard to the protection of the Densu River, the trees planted along the banks of the river have served their purpose of preventing the river from drying up even in the dry season.<sup>164</sup> This outcome is indicative of the effectiveness of participation in protecting the river body.

#### 6.4.4 Awareness Creation and Sensitisation

One of the roles of the Densu Basin Board is to build awareness and instil water resources management responsibility at the basin level. The Densu Basin Board Awareness Creation Committee develops action plans to educate and create awareness among land and water users for the adoption of appropriate methods of farming, fishing, waste management and exploitation of forest resources for fuelwood, timber and medicine in schools and the general public. Members of this committee include the Director of the Department of Women, Ministry of Women and Children’s Affairs, ER; the representative of Akyem Abuakwa Traditional Council; the Executive Director of Earth Service, representative of developmental NGOs; the Director of the National Commission on Culture, ER; and the Densu Basin Officer.<sup>165</sup>

In order to fulfil its mandate the WRC holds awareness creation workshops that aim at capacity building of District Assemblies on water resources management. The DAs are made aware of their roles and that of WRC in protection of rivers and other water bodies.<sup>166</sup> The work of WRC in creating awareness is facilitated by the collaboration with organisations that are already on the ground: NGOs, Faith Based Organisations and government agencies. In this regard, the WRC has constructed and put up few bill/sign

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<sup>164</sup> Interviews 5, 17, 43, 48, 49 (2009).

<sup>165</sup> Interviews 5, 19 (2009); file on Awareness Creation Sub-Committee, Densu Basin Secretariat.

<sup>166</sup> Interviews 1, 30 (2009).

boards in the basin with messages on protecting the rivers and other water resources.<sup>167</sup> For effective dissemination of messages with the view to changing attitudes and making communities more sensitive to protecting the aquatic/natural environment, the WRC, working together with the DBB, contracted the National Commission on Culture in the Eastern Region to organise and perform dramas in three communities; Asuboi, Akwadum and Nsawam. This approach relied on the use of culture to have effective communication.<sup>168</sup>

The WRC/Densu office organises open forums for communities in the lower basin but this is not frequent due to lack of resources. Box 6.1 describes details of one of such forums observed by the author.

The community involvement in water resource protection is demonstrated by the Weija Lake Protection Association (WLPA) which has members (mainly fishermen) from the Weija community. It organises training and sensitisation seminars for the communities around the Weija Lake with funding support from the WRC. It relies on resource persons from the WRC, Fisheries Commission and the GWCL.<sup>169</sup> Some of the WLPA activities are devoted to educating the communities on the right fishing methods and fisheries regulations of the Fisheries Commission through seminars.<sup>170</sup>

**Box 6.1 Open Forum on Saving the Densu River and the Weija Lake**

The open forum was held at Weija on August 20, 2009. The purpose was to discuss how the WRC together with the community could help save the Densu River and the lake. The forum was held in three major local languages spoken in the community, Twi, Ga and Ewe, with English coming in intermittently. Weija is a settler community made up of persons drawn from Southern Ghana.

The Acting Executive Secretary (AES) of WRC chaired the forum. The Densu Basin Officer mounted a slide show demonstrating bad practices that impinge on the Densu River and the Weija Lake. The slide show communicated well with the people, the languages used were understood as well.

An enforcement notice was served at the forum warning all persons encroaching on and illegally working in and/or living in and around the land area known as the Weija Dam Project Area to vacate the place. The implication was explained to them. Opportunity was given to the people to ask questions and give comments. Only two females asked questions, the rest, about 30 were males. This may be due to the cultural norm that women are not expected to speak at public gatherings (see Section 8.2). The WRC enforces law when the situation becomes critical. This time the dam was threatened as people had encroached by constructing structures close to it.

I interviewed some of the participants before the start of the forum but they were uncooperative and seemed to be tense. The reason may be that they did not know or feared what the forum was about. Some knew it would affect them but were not sure whether it would be positive or negative. However, after the forum those that I spoke to opened up. They indicated that they were willing to assist the WRC in finding solutions to the problem since they understood that they were also at risk if the situation persisted.

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<sup>167</sup> Interview 1 (2009); author's observation (2009).

<sup>168</sup> Interview 5, 9 (2009).

<sup>169</sup> Interviews 1, 38 follow-up (2010).

<sup>170</sup> FGD 4 (2009).

NGOs are involved more in advocacy and awareness creation in the basin. The Earth Service, an environmental NGO organises community durbar/open forums, school symposia, school quizzes in selected communities. These have been very scanty though. In 2008, Earth Service was contracted by WRC under the WAC II project to undertake awareness creation activities in 24 communities in the Weija catchment area. The aim was to disseminate messages to make communities sensitive to conserving the aquatic and natural environment.<sup>171</sup> The Earth Service used educational materials and messages developed by the WRC, which included posters and leaflets.<sup>172</sup> In 2006, Earth Service held symposia in six senior high schools in Nsawam, Suhum and Koforidua in the middle and upper basins. These were sponsored by WRC. The essence was to form nuclei of water clubs in these schools and use the members of the club to de-silt and clear water weeds from the rivers in the basin. This did not materialise, as there was no follow-up due to inadequate funding.<sup>173</sup> Photo 6.3 is a picture taken at a school quiz organised by the Densu Basin office and the Earth Service at Weija for basic schools.



**Photo 6.3 School Quiz at Weija**

Source: Fieldwork (25-06-09).

GOFA organises durbars to address members of the communities living along the river especially around Nsawam area. GOFA educates the communities on how to safeguard the rivers and the consequences of some of their behaviours through youth water talks, meetings, forums and symposia. GOFA also organises meetings with churches and

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<sup>171</sup> Interviews 5, 19 (2009).

<sup>172</sup> Interviews 19, 70, 73 (2009).

<sup>173</sup> Interviews 5, 19 (2009).



schools.<sup>174</sup> For the durbars, posters and loud speakers on mobile vans are used to make announcements of the date and venue. Music is also used to attract the public to the durbars.<sup>175</sup> The chiefs provide space/venue for the durbars. The chiefs and their elders participate in the durbars as well. The District Assemblies (DAs) help by offering their assembly halls for organising meetings with churches and schools.<sup>176</sup> There is collaboration between the NGO, District Assemblies and traditional rulers (see illustration in Figure 6.2 above).

The participatory methods employed in the awareness creation lend themselves to instrumental approaches to participation. The intensity of participation experienced by the communities is mainly tokenism, at information level. It is more of unidirectional communication according to the classification by Rowe and Frewer (2005). Information flow is mainly top-down, from authorities to the public (see subsection 2.5.7). Though the intensity of community participation is tokenism, the communities acquire knowledge in protection of water resources and are therefore being empowered.

#### 6.4.5 Stakeholder Participation in Monitoring Activities

The Densu Basin Board members undertake an ecological monitoring tour three times in a year to the upper, middle and lower basins. The board members complete an ecological monitoring information form during the tour. The information recorded on the form is used for socio-economic and environmental assessment. (See Appendix IV for a sample of the ecological monitoring information form). The tour is for members to identify, appreciate and find solutions (especially technical solutions) to problems relating to pollution, land degradation, erosion and any form of activity that impinges on water bodies directly and indirectly on the environment. In addition, they assess the impact of human activities on livelihoods, communities and the environment.<sup>177</sup> Photo 6.4 is a picture of the DBB members walking through the Atewa Forest Reserve (where illegal lumbering has been going on) during an ecological monitoring tour in the upper basin of the Densu River Basin.

The water monitoring programme on water quality of the Densu River dates back to the 1960s. The first was carried out by the then Public Works Department (PWD), but was short-lived due to the lack of resources. It looked at the level of dissolved oxygen. In 1996, a special Weiija Lake water quality survey was conducted. Another exercise was carried out in 2001 to ascertain the water quality situation in the basin under the Water for African Cities (WAC) I Programme (WRC, 2003a). The GWCL, as a major supplier of potable water, is interested in the quality of raw water that it abstracts. It independently monitors the water quality of the rivers it abstracts at their intake points in the basin.<sup>178</sup>

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<sup>174</sup> Interview 16 (2009), FGD 6 (2009).

<sup>175</sup> Interview 16 (2009).

<sup>176</sup> Interviews 16, 32 (2009), FGD 12, 13 (2009).

<sup>177</sup> Interviews 5, 7, 9 (2009).

<sup>178</sup> Interview 3 (2009).





**Photo 6. 4 Atewa Forest Reserve – Densu Basin Board Members on Ecological Monitoring Tour**

Source: Fieldwork (18-09-09).

A water quality-monitoring programme targeting both surface water and underground water was initiated by WRC and it is carried out by the Water Research Institute (WRI). The WRC has adopted a Water Quality Index (WQI) that describes the state of water quality as a whole. Key physical, chemical and microbiological determinants are selected, aggregated and the WQI value calculated for specific monitoring sites.<sup>179</sup> The water is classified into four categories based on the WQI value (see Table 6.3). See Box 6.2 for the trend of water quality along the Densu River.

**Table 6.3 Classification of Surface Water Based on WQI Values**

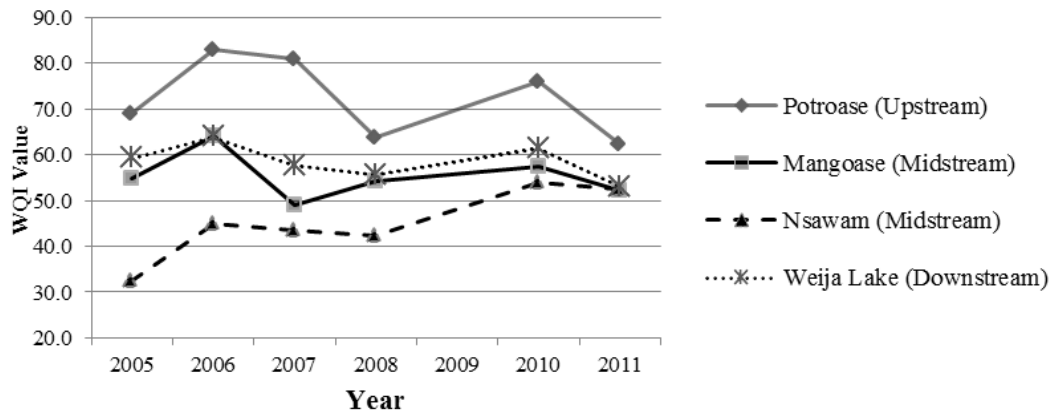
Class	WQI Range	Description
I	>80	Good, unpolluted and/or recovering from pollution
II	50-80	Fairly good quality
III	25-50	Poor quality
IV	<25	Grossly polluted water

Source: WRC (2011d)

<sup>179</sup> Interview 1 (2009).

**Box 6.2 Trend of Water Quality along the Densu River**

Since 2005, WRC and WRI have monitored the water quality of the Densu River at four selected monitoring sites. The WQI indicates the degree to which the natural water quality is affected by human activity. The chart below presents WQI values at the four monitoring sites on the Densu River from 2005 to 2011.



Source: Constructed based on data from WRC (2012a; 2011d); WRI-CSIR (2006; 2008; 2009).

Potroase monitoring station showed the highest WQI value from 2005 to 2011 with WQI values in Class I and II categories, which indicate good, almost unpolluted water. The WQI values decrease progressively from Potroase to Nsawam within the seven years. The water quality after entering the Weija reservoir improves. The water source, apparently, manages to “recuperate” and to some extent recover from the heavy pollution load at the midstream. The water quality at all the stations improved from 2005 to 2006. However, the water quality at all the stations declined in 2007 and in 2008 with the exception of Mangoase. The water quality along the River improved in 2010 (2009 figures are not available) and declined again in 2011. The quality was fairly good (Class II) throughout the period with WQI values above 50 at all the stations except Nsawam. However, the water quality at Nsawam has shown a dramatic improvement from WQI values of 32.5 (poor quality) in 2005 to 52.4 (fairly good quality) in 2011. The Nsawam trend is probably due to the removal of the mountain high refuse from the bank of the river in 2004. On the average there has not been much change over the years (2005-2011) at all the monitoring sites except Nsawam.

When interviewees were asked about the water quality of the Densu River, the responses were mixed. Those who felt the water quality has improved attributed the improvement in water quality to the impact of activities initiated by the WRC/DBB and NGOs between 1997 and 2006 such as relocation of solid waste dump sites, river bank protection and afforestation (interviews 5, 16, 40, (2009)).

#### 6.4.6 Stakeholder Participation and IWRM Planning

The WRC and the Densu Basin Board has developed an Integrated Water Resources Management (IWRM) plan for the Densu Basin. The IWRM plan is based on a number of assessment studies and information reviews. These studies revealed implications relevant for the decisions made during the process of prioritising measures forming the IWRM

plan.<sup>180</sup> Research institutions and consultants carried out the studies by consulting communities through community forums, focus group meetings and public hearings with farmers, households and industrialists in identifying problems of water resources management. These included land degradation and pollution. The communities also analysed the problems and detailed the implications and impact. The research institutions and consultants consulted government agencies, NGOs as well as District Assemblies through group meetings (WRC, 2007a). However, prioritisation of problems and outlining intervention options for basin level activities were carried out at stakeholder workshops attended by the Densu Basin Board members and District Planning Officers of five District Assemblies excluding the local communities.<sup>181</sup>

Industrialists were not included in the stakeholder workshops because it was difficult to identify them, as they were not in any organised group. The local communities were not engaged throughout the planning phases. When an enquiry was made the response obtained by the author was that it was not practicable to have the communities at the workshops (level).<sup>182</sup> May be an appropriate participatory method could have been used to engage the communities at a different level, but that was not considered. The Densu Basin Board and WRC contracted a consultant for the compilation of the interventions into action plans (WRC, 2007a). Further workshops were held for DBB members and representatives from other government agencies (GIDA, Ghana Water Country Partnership) on coming out with strategies for implementation of the IWRM plan.

The extent of participation by the communities is less intensive as they were consulted to give inputs by identifying and analysing implications of water management problems. However, they were excluded from meetings that took decisions on actions that were to be carried out. See Table 6.4.

## **6.5 Summary of Methods, Intensity and Outcomes of Stakeholder Participation in the Densu Basin**

The intensity of participation is determined by the roles the participants play (Hare et al., 2003) and the power they have in decision/policymaking and implementation processes of the various projects/activities (Buchy and Hoverman, 2000). Participation is intensive when stakeholders are actively involved in taking decisions and planning (see 2.5.7). The outcome of participation of participants is based on whether the participatory approach is instrumental or transformative. Stakeholders are likely to be empowered when the approach is transformative or when they take part in the decision-making process and acquire power to influence decisions. Stakeholders are unlikely to be empowered when the approach is instrumental because the emphasis is more on achieving the project objective than meeting the needs of the stakeholders (see 2.5.4, 2.5.5 and Figure 2.3).

At the basin level, key stakeholders involved in the participatory processes are mainly government agencies and NGOs. They have power in in taking decisions. Their participation is intensive and the outcome of their participation is empowerment because

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<sup>180</sup> Interviews 1, 10 (2009).

<sup>181</sup> Interviews 5, 6, 7, 28 (2009), 90 (2010).

<sup>182</sup> Interviews 1, 9 (2008).

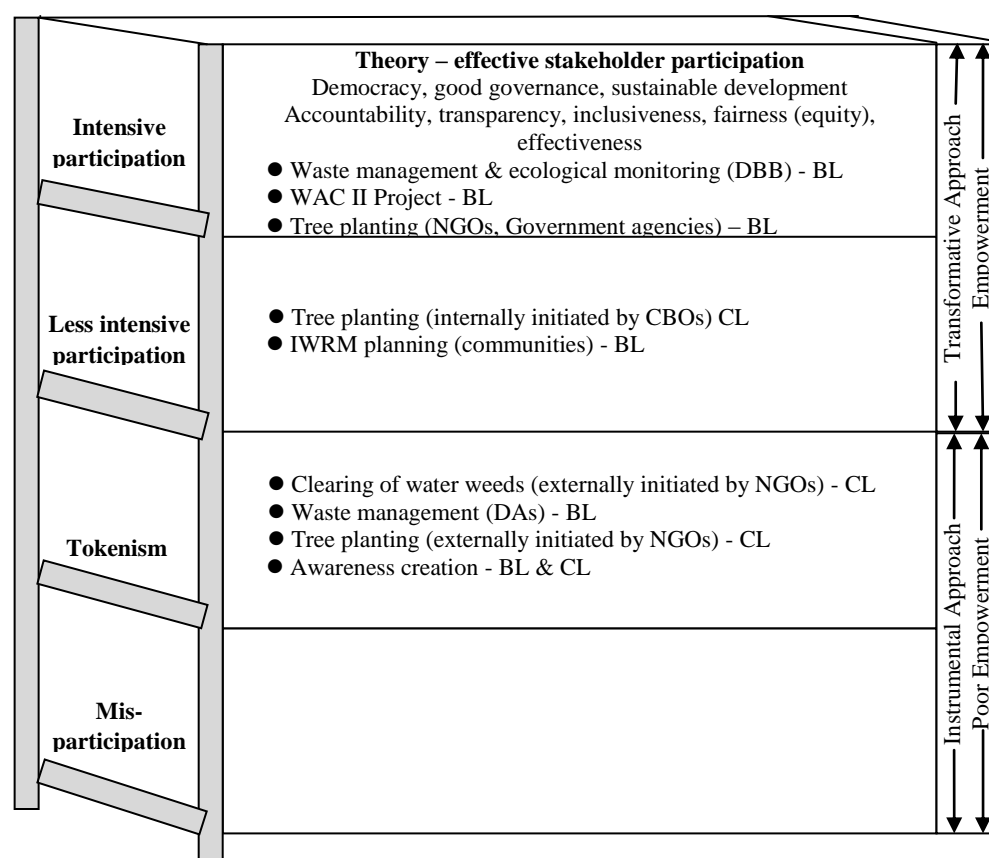
they initiate and plan the projects. However, at the community level the participants are mainly community members and the intensity of their participation ranges between tokenism and intensive participation as discussed in the previous section (see also 2.5.7). They are not empowered in most cases. Table 6.4 presents this and shows the differences between stakeholders who initiate (authorities) the projects or activities and those who are invited to participate (participants) in the activities or engaged in them. This difference between the stakeholders depicts power relations. According to Kothari (2001), an invitation to participate suggests an exercise of control and power over the participant.

**Table 6.4 Methods, Intensity and Outcome of Stakeholder Participation in Water Resource**

Protection Activities at the Community Level Activities	Motivation	Key stakeholders		Participatory methods/procedures	Intensity of participation of participants	Outcome of participation of participants
		Authorities	Participants			
Clearing water weeds	Induced by incentives	NGO	Communities	Provision of skilled labour	Tokenism	Poorly empowered
Provision of sanitation facilities	Induced by incentives	International donor, gov't agency	CBO, DA, community leaders, gov't agencies	Meetings to take decisions – problem solving	Intensive	Empowered
Communal work	Obligated by communal norms	Traditional authorities	Communities	Communal labour	Less intensive	Fairly empowered
Tree planting	Induced by incentives	NGOs	Community members	Provision of labour	Tokenism	Poorly empowered
Establishment of commercial tree/fruit crop plantation	Induced by incentives	NGOs	Farmers	Training & establishment of commercial tree/fruit crop plantation	Intensive	Economically empowered
Tree planting	Local initiative	CBOs	Communities	Deliberative meetings to take decision, labour provision	Intensive	Empowered
Awareness creation & sensitisation	Persuaded	Gov't agencies, NGOs	Communities	Drama, seminars, open forums, symposia, meetings, school quizzes	Tokenism	Empowered with knowledge
IWRM planning	Persuaded	Gov't agency, private consultant	Communities	Forums, focus group meetings, public hearings	Less intensive	Fairly empowered

The table depicts four different ways of how participants were motivated to participate. This may be simplified but it shows that there are four distinct ways of starting stakeholder participation at the community level in the Densu Basin.

The complex ladder of participation is applied here to the different activities involved in the protection of water resources (Figure 6.3). Since the stakeholders participating in the activities perform different roles, their intensities of participation and participatory approaches applied differ. Therefore, the intensity of participation changes depending on the activity and role of stakeholders.



**Figure 6.3 Complex Ladder of Stakeholder Participation and Water Resource Protection in the Densu Basin**

Key:

BL = Basin level

CBO = Community-based organisation

CL = Community level

DA = DA

DBB = Densu Basin Board

NGO = Non-governmental organisation

WAC = Water for African Cities

An overarching question is whether stakeholder participation has been effective in terms of water resources management outcomes - improved water resource protection and water quality in the Densu Basin? The answer is based on a recall of subsection 2.5.3 which shows that participation effectiveness is determined by (a) the level of success - the extent to which a project/activity has been successful in achieving its objectives; (b) the improvement in the quality of the decision-making process; (c) increased sense of ownership; or (d) ability to meet the needs of stakeholders. Table 6.5 uses these criteria to determine whether stakeholder participation has been effective in water resources management outcomes.

**Table 6.5 Effectiveness of Stakeholder Participation in Water resources Management Outcomes**

Project/Activity	Effectiveness criteria	Findings/Experiences	Effectiveness
Tree planting -community initiated activities	Quality of the decision-making process	CBOs, chiefs representing communities take decisions	Effective
	Meeting the needs of stakeholders	The need was to protect water resource	Effective
De-silting small rivers – community initiated activity	Quality of the decision-making process	Community leaders take decisions	Effective
	Sense of ownership	Increased sense of ownership	Effective
	Meeting the needs of stakeholders	Yes, prevents flooding	Effective
Weija Lake Afforestation Project - government/sponsor initiated project	Level of success in achieving objectives	Weija Lake Afforestation project banks of the lake covered with trees	Effective
IWRM planning	Level of success in achieving objectives	Basin IWRM plan is ready and in use at basin level	Effective at basin level
	Quality of the decision-making process	Inclusive in the initial stages but not in prioritisation of problems & actions	Not effective at community level
	Sense of ownership	Basin board	Effective
	Meeting the needs of stakeholders	Meeting needs of government agencies	Effective
Tree planting - NGO initiated projects	Level of success in achieving objectives	Trees planted protect rivers from drying up	Effective
	Quality of the decision-making process	Not improved	Not effective
	Meeting the needs of stakeholders	Economic improvement – short & long term	Effective
Clearing of water weeds - NGO initiated	Level of success in achieving objectives	Successful but not sustainable	Short-term effective
	Quality of the decision-making process	Swimmers not engaged	Not effective
	Sense of ownership	Nil	Not effective
Water for African Cities (WAC) II project - provision of sanitation facilities	Level of success in achieving objectives	Pollution reduction expected to be low	Not effective
	Quality of the decision-making process	Inclusive of key stakeholders	Effective
Awareness creation & sensitisation	Level of success in achieving objectives	Awareness creation not frequent therefore having limited impact.	Not effective
	Level of success in achieving objectives	No change in water quality of the Densu River between 2005 & 2011.	Not effective

Stakeholder participation is effective when there is adequate financial resource. In the Weija Lake Afforestation Project the sponsor, British American Tobacco provided adequate funds. The project also ensured a multi-stakeholder involvement. In the case of the WAC II project, stakeholder participation was found not to be effective due to inadequate financial resources.

## **6.6 Inferences**

The chapter depicts four distinct ways of starting stakeholder participation. In the first approach stakeholders are *induced* to participate by some kind of incentives such as ‘food-for-work’; payment for labour; or giving training and inputs on credit to enhance their livelihood. Stakeholders, in the second approach are *persuaded* to get involved in the participatory processes through awareness creation. The third approach includes processes where stakeholders are *obliged* to participate by traditional authorities and communal norms. The last approach secures stakeholder participation through the stakeholders’ own *initiatives* after being made to recognise their needs. The first two do not lead to high levels or intensive stakeholder participation except where training is given to participants to acquire a life-long economic activity; in this case, they are economically empowered. With the third one, participation by the traditional authorities who take decisions is intensive whilst that of the communities who are obliged and go by the communal norms is less intensive. The fourth one leads to intensive participation as the stakeholders initiate the processes they make decisions, plan and control the activities. The approaches that induce participation as well as that build on stakeholder initiatives are similar to two types of participation in the typology offered by Pretty et al. (1995) based on roles and responsibilities of stakeholders. These are ‘participation for material incentives’ and ‘self-mobilisation’ respectively.

There have been diverse participatory methods/strategies employed and varying intensity of stakeholder participation in the protection of water resources in the Densu Basin. At the basin level, the emphasis has been on methods that empower stakeholders to participate actively in decision-making processes (board and sub-committee meetings, research, monitoring trips and planning and training workshops) with respect to the participation of government agencies and NGOs. This may explain why the degree of participation of the stakeholders seems to be intensive as far as protection of water resources is concerned at the basin level. On the other hand, participatory methods/strategies employed at the community level are such that some of the methods/strategies empower; others do not.

NGOs and government agencies engage community-based organisations (CBOs), community leaders and individual community members in participatory processes using instrumental approaches in achieving project objectives efficiently. Power dynamics play out in such circumstances. The NGOs and government agencies are not inclined to share power with the communities. The communities are engaged in participatory processes where they are made to offer their labour. The communities are not empowered. The intensity of such participation is tokenism. Exclusion of local people from taking part in the prioritisation of problems and outlining intervention options as well as coming out with strategies for implementation of the IWRM plan can bring about implementation problems and failure of the IWRM programme.

However, there is intensive participation of communities/primary stakeholders where the communities themselves (community leaders and CBOs) take initiatives for activities and decisions. Participation is sustained where communities take the initiative. There is a beneficial learning outcome for CBOs in the participatory processes and that the avenues to create the enabling environment for this to proceed should be encouraged.

Stakeholder participation matters in water resources management outcomes with respect to improved water resource protection and water quality when a) there is adequate financial resource or b) primary or beneficiary stakeholders take initiatives. Stakeholder participation does not matter when funds are limited as in the WAC II project despite the involvement of key stakeholders in decision-making processes.

The approach and intensity of participation may vary based on the different activities and how these activities are perceived to affect everyday life of the people. The next chapter examines this proposition by concentrating on potable water delivery in the basin.



## 7 Stakeholder Participation and Potable Water Delivery in the Densu Basin<sup>183</sup>

### 7.1 Introduction

The purposes of having stakeholder participation include the effectiveness of programmes or projects and the democratisation of programmes. Chapter 3 shows the outcome of different cases of stakeholder participation from a number of developing countries and the factors that brought about these results. The previous chapter demonstrated how stakeholder participation processes are carried out in protection activities, which are perceived to affect the communities indirectly.

The present chapter examines the participatory processes within the context of potable water delivery, which the communities perceive to affect their everyday life directly. It examines the effectiveness of stakeholder participation in the water delivery sub-sector in the Densu Basin. The general question addressed is: What is the outcome of stakeholder participation in the water delivery system? The specific questions are: Is there a need for stakeholder participation in the water delivery sector? How do the different stakeholders participate in the water delivery system? What is the impact of the water delivery system on communities?

The methods employed in investigating include a review of literature and existing documents, individual, key informant and group interviews and observations. The second section of the chapter focuses on the situation of potable water in the Densu Basin in Ghana (7.2). It is followed by the emergence of stakeholder participation in the water delivery system (7.3). The fourth section (7.4) dwells on the involvement of stakeholders in the water delivery system. The fifth section (7.5) examines the sustainability and the impact of the water delivery system on communities. Problems facing the water delivery system are identified in section 7.6. Inferences from the chapter are presented in the last section (7.7).

### 7.2 Potable Water Situation in the Densu Basin

The Densu River serves as the main source of water supply for a number of fast growing communities within and outside the basin. Groundwater resources of the basin also serve as an important source of water supply for the basin's rural population as well as small towns in the basin as piped water supply schemes.<sup>184</sup>

The Densu basin is part of the coastal river system in southern Ghana and has a lot of rural settlements, in which the indigenous population uses groundwater, rivers, streams, ponds and springs as their sources of potable water (Tay and Kortatsi, 2008). The main sources of drinking water are shown in Table 7.1. The table shows the water supply situation for each district within the Densu Basin. The dependency of the Awutu-Efutu-Senya and the Ga districts on tanker water supply is high compared to the other districts

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<sup>183</sup> The earlier version of this chapter was published by Physics and Chemistry of the Earth in 2012 (Anokye and Gupta, 2012).

<sup>184</sup> Interviews 85, 88 (2010).

in the basin. This is because the Awutu-Efutu-Senya and the Ga districts are along the coast where aquifers have saline intrusions from the sea. Hence, the groundwater in these districts is salty. Tanker water supply is therefore the second highest source of drinking water after pipe-borne water.

**Table 7.1 Main Sources of Drinking Water (% of Household in Entire District)**

District	Pipe-Borne Supply	Borehole and Well	Tanker Supply	Spring & Rain Water Harvesting	River, Stream, Pond and Dugout
East Akim	19.5	43.9	0.4	5.7	30.5
New Juaben	66.6	20.9	0.8	2.2	9.5
Suhum-Krabo-Coaltar	14.2	46.7	0.5	3.1	35.5
Akwapim North	39.7	24.2	1.3	6.8	28.0
Akwapim South	37.3	34.4	1.7	7.2	19.4
West Akim	11.0	48.2	0.3	4.0	36.5
Awutu-Efutu-Senya	43.2	20.6	20.9	1.3	14.0
Ga East/West/South	57.6	9.8	19.2	2.8	10.6
Accra Metro	90.5	4.7	3.1	1.0	0.7
Densu Basin Average	47.6	22.2	10.0	3.4	16.8

Source: WRC (2008a) and GWCL (2006).

### 7.2.1 Urban Water Supply Coverage in the Densu Basin

As of 2007, there were eight piped water supply schemes in operation serving mainly urban communities (see Table 7.2). The Table shows that more urban communities rely on the Densu River system for piped water supply than they do on groundwater. The water supplied is used for domestic, industrial and commercial purposes. Quite a number of sachet water<sup>185</sup> producers rely on pipe-borne water. However, a number of industries and some institutions rely on their own private water supply, mainly from boreholes<sup>186</sup> and these are not included in the following estimates. The piped water schemes serve an estimated urban population of 337,000. The urban schemes (excluding the Weija scheme) serve 110,000 estimated urban dwellers in the Densu Basin, which is about 53% of the total urban population within the basin. Water abstraction for the Weija treatment plant alone forms 95 percent of the total abstraction of water for urban piped water supply schemes. Of the total abstraction, 84 percent is “exported” from the Weija plant and used outside the Densu Basin in the Accra Metropolis (WRC, 2007a) (see 6.2.2).

There has been an expansion in production at the Weija headwaters from 40 gallons (181,844 m<sup>3</sup>) a day to 55 gallons (250,035 m<sup>3</sup>) a day since 2008.<sup>187</sup> There is also expansion of 3.5 million gallons (15,911 m<sup>3</sup>) a day in the water supply to Koforidua and

<sup>185</sup> Water packaged in small plastic bags and sold usually referred to as sachet or pure water in Ghana.

<sup>186</sup> Interviews 20, 21, 22, 24, 25, 26, 27 (2009).

<sup>187</sup> Interview 13 (2009).

its environs since 2009. The additional 15,911 m<sup>3</sup> is ‘imported’ from the Volta River outside the Densu Basin. The raw water is pumped and treated at Bukonor and then distributed to Koforidua and its environs.<sup>188</sup>

**Table 7.2 Piped Water Supply Schemes in the Densu Basin**

Water supply scheme	District	Source	Intake
Weija	Ga South	Surface water, Densu River	Dam
Nsawam	Akwapim South	Surface water, Densu River	Weir
Koforidua	New Juaben Municipality	Surface water, Densu River	Weir
Apedwa	East Akim	Surface water, Densu River	Weir
Old/New Tafo	East Akim	Surface water, Bayira River	Dam
Asamankese	West Akim	Surface water, Abuchen River	Weir
Adeiso	West Akim	Groundwater	3 boreholes
Suhum	Suhum-Kraboia-Coaltar	Groundwater	4 boreholes

Source: Compiled from WRC (2008b); interview 88 (2010).

In Accra (the capital city of Ghana), part of which lies in the Densu Basin, only 30 percent of the residents enjoy a 24-hour water supply daily. Another 30 percent of the residents receive a 12-hour supply daily for five days a week; 25 percent receive supplies two days in a week. The remaining 15 percent living on the outskirts have supply once a week or none at all (WRC, 2010; Nii Consult, 2003). The urban poor, particularly those in marginalised areas or slums usually rely on insecure, unclean water supplies often provided by private entrepreneurs at expensive rates.<sup>189</sup> There is therefore the need for expansion of safe drinking water supply in the urban areas.

### 7.2.2 Rural Water Supply Coverage in the Densu Basin

The Densu River system with its tributaries and seasonal streams serves directly as the water source for some part of the rural area. Increasingly, the rural communities are giving up this source of water in favour of water supplied through boreholes and hand-dug wells due to accelerated programmes (such as the National Community Water and Sanitation Program (NCWSP)<sup>190</sup> to improve their water supply situation. Hence, the main sources of water in the rural areas are boreholes, hand-dug wells, rivers and streams. Rainwater harvesting is also common in the rural areas. Rainwater is harvested from roofs of buildings and stored in barrels, drums and pots. Rainwater is seasonal and depends on the rainfall pattern, which has been discussed under 6.2.1.

Most boreholes and wells are fitted with hand pumps and used for domestic purposes. Boreholes of small-town piped systems are mechanised with motor-driven pumps for provision of water. An example of the mechanised system is the Nankese water supply system (in the Suhum-Kraboia-Coaltar district). Water from boreholes and wells are

<sup>188</sup> Interview 88 (2010).

<sup>189</sup> Interviews 3, 16 (2009), 89 (2010).

<sup>190</sup> The NCWSP was launched in 1994; see Subsection 7.3.2 for details.

potable and virtually unpolluted especially the ones provided under the NCWSP through the District Assemblies and facilitated by the Community Water and Sanitation Agency (CWSA). These are tested after construction and are treated from time to time or when there are reports of contamination.<sup>191</sup>

As of 2010, about 2,306 boreholes and 1,064 hand-dug wells had been constructed in the Eastern Region for domestic purposes. They served 962,211 people (58.58%) of the region's rural population of 1,642,518 through improved water points (CWSA, 2011b). Table 7.3 is the trend of coverage of rural water supply in the Eastern Region, which covers greater part of the Densu Basin (see Figure 1.1 for map). The trend of the rural water supply coverage is decreasing because the rate of supply increase cannot catch up with the rate of population increase in the region.

**Table 7. 3 Rural Water Coverage – Eastern Region**

Year	2000	2002	2004	2006	2008	2010
No. of communities	2,771	2,771	2,771	2,771	2,771	2,771
Total population	1,429,334	1,469,629	1,511,020	1,553,677	1,597,529	1,642,518
Rural population served	872,848	890,263	907,909	925,867	944,039	962,211
Rural coverage	61.07%	60.58%	60.09%	59.59%	59.09%	58.58%

Source: CWSA (2011b).

Some communities have potable water facilities but they have to walk long distances to access it. At Apedwa-Tema for instance, some households walk over 500 meters to the point source. There is only one borehole and as of 2005 when it was constructed, it was serving a population of 799. The community has indicated to the District Assembly that it is capable and ready to have a second borehole under the NCWSP but the Assembly has asked it to hold its request, as there are several communities who do not have any at all.<sup>192</sup>

Akyem Asafo community, also in the East Akim district, has four boreholes. Water from the four boreholes is inadequate for the community to the extent that some members of the community supplement their water needs by fetching water from the polluted streams.<sup>193</sup> The Obuoparko stream is one of the water sources used by the community besides rainwater and water from boreholes. This stream is polluted yet some of the locals use it for domestic purposes, as they do not have access to safe drinking water (Photo 7.1 shows the Obuoparko stream).

Water from boreholes and wells are used for cooking and drinking whilst water from rivers and streams are used for washing and small-scale irrigation but some rural people depend directly on water from rivers and streams for all their domestic purposes.<sup>194</sup> At Densuano in the New Juaben Municipal Assembly, for instance, the only source of water

<sup>191</sup> Interviews 34, 37 (2009).

<sup>192</sup> FGD 25 (2010).

<sup>193</sup> FGDs 1, 10 (2009).

<sup>194</sup> Interviews 98, 100 (2010), FGD 25 (2010).

is the Densu River. The quality of water from rivers and streams are not as good as that from wells and boreholes.<sup>195</sup>



**Photo 7.1 Obuoparko Stream – A Water Source at Akyem Asafo**

Source: Fieldwork (31-08-09).

Water from boreholes is reliable and it is all year round. However not all wells produce water all year round, some yield very little water in the dry season.<sup>196</sup> This is particularly so in the Akwapim South Municipal area due to the rocky nature of the land. Communities that rely on the Densu River and its major tributaries have water all year round. The streams in the basin dry up in the dry season and communities that rely totally on such sources have to walk long distances to search for water. There is the need for expansion of safe drinking water supply in rural areas as well.

### **7.3 The Onset of Stakeholder Participation in the Water Delivery System**

#### **7.3.1 Urban Water Delivery**

The government centrally manages the urban water delivery system, and this dates back to the 1920s when the Hydraulic Division of the Public Works Department (PWD) of the Ministry of Works and Housing (MWH) managed the system. Then in 1958, the Water Supply Division was set up under the same ministry to be responsible for water supplies. The Ghana Water and Sewerage Corporation (GWSC) was established in 1965 in line

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<sup>195</sup> FGDs 1, 10, 18, 19 (2009), 20, 21 (2010).

<sup>196</sup> FGDs 1, 20, 21 (2008), 25 (2010).

with recommendations of the World Health Organisation (WHO) to centrally manage the water supply and sanitation systems (GWCL, 2012a; b).

The GWSC suffered many problems. Between 1970 and 1990 one-third of the facilities for water supply were broken down and the remaining were operating below their expected capacity (GWCL, 2012b; Nii Consult, 2003). Between 1992 and 2002, the percentage of the urban population supplied with water dropped from 76 percent to 59 percent nationally. This was accompanied by non-payment of bills by consumers, especially the government agencies (Aryeetey and Ahene, undated). Frequent breakdowns, poor service and maintenance of facilities worsened the already low willingness to pay. Reforms were initiated within the water supply sector through the influence of the World Bank/IMF, donor countries and other external support agencies;<sup>197</sup> and in 1994, there was an institutional separation of small towns and rural operations from urban operations that were to be privatised. It was in response to the increasing advocacy at the international front in the 1990s of private sector involvement in partnership with government for sustainable and efficient water supply systems (Fuest and Haffner, 2007; Finger-Stich and Finger, 2003; Seppälä et al., 2001). The Community Water and Sanitation Division (CWSD) was created within the GWSC to manage the small towns and rural operations. The GWSC was converted to a limited liability company, the Ghana Water Company Limited (GWCL), in 1998. This was done as one of the steps for introducing the private sector participation into the management and operation of urban water supply system.

The policy response to the problem of poor services and poor cost recovery was the introduction of participation in the form of public-private partnership (PPP). Key actors that participated in the policymaking process were the government of Ghana, an international donor (World Bank), foreign consultants and GWCL. Participation in the form of PPP was needed for efficient and improved urban water supply but the public was excluded from the policy choice.

Public decision-makers maintained that the idea of the PPP was at that time (1998/99) accepted by all stakeholders. However, the PPP policy met with a lot of resistance from the public (Agyenim, 2011; Fuest and Haffner, 2007). The processes associated with private participation in managing urban water supply and the likely effect the issue would have on the urban poor brought a gap between organisations of civil societies and public agencies (Royal Danish Ministry of Foreign Affairs, 2002). The public resistance showed a perception that the debate on public policy choices had not been actively encouraged.

The key driving forces, which made the government of Ghana, widen the participation scope with regard to urban water delivery by introducing private sector participation, were the increasing demand by the public for improved service delivery; and the poor financial state of the GWCL. Foreign consultants, commissioned by the World Bank, deliberated on the type of public-private partnership to be adopted for the urban water supply sub-sector. A five-year management contract was finally adopted in 2006 under which ownership of GWCL remained with the government (GWCL, 2006). The 'management contract' option of the PPP in water services was towards the minimum

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<sup>197</sup> Donor countries such as the Australian and Italian governments and external support agencies, Nordic Development Fund, African Development Bank, CIDA, DFID, OECF, KfW and GTZ.

private sector involvement on the spectrum of private sector arrangements (see Seppälä et al., 2001: 44). The adoption corroborates Finger-Stich and Finger's (2003) argument that when development services are not commercially lucrative, the government most often transfers management functions of the services to the private sector but maintains ownership. See Table 7.4 for organisational/institutional development in the urban water supply in Ghana.

**Table 7.4 The Development of Water Supply Organisations/Institutions for the Urban Sector**

Period	Organisation	Functions/activity/purpose
1928	Hydraulic Division of PWD	Established to manage water supply systems
1958	Water Supply Division set up under MWH	Responsible for water supply
1965	GWSC established	Responsible for water supply and sanitation
1994	GWSC-CWSD	Small towns and rural operations separated from urban operations within GWSC towards privatisation
1997	PURC	Monitors water prices & quality
1998	GWSC converted to GWCL	Reforms initiated within the water supply sector – two new organisations created - GWCL & CWSA (separated)
1998-1999	Government introduces PPP policy	Participation in the form of PPP as policy response to poor services
2006-2011	GWCL/AVRL	5-year management contract adopted
2012	GUWL	Established to manage the operations of the GWCL

Source: GWCL (2012a; b); Fuest and Haffner, 2007; GWCL, 2006; WaterAid, 2005.

The private company in partnership with GWCL was Aqua Vitens Rand Limited (AVRL); it is a merger of the Vitens and Rand companies of the Netherlands and South Africa respectively. AVRL was to support GWCL to improve its performance, rehabilitate and extend the infrastructure. The GWCL outsourced to AVRL some of its functions including operations, maintenance, distribution, billing and revenue collection. AVRL had offices in the regional capitals and a head office at the national level. The Densu Basin covers basically parts of two regions, Eastern and Greater Accra regions. It was therefore served by two AVRL Regional offices.

The result of the public-private partnership did not meet the expectations of the public. The target set by the government was not met. This included reduction in the volume of unaccounted for water losses, reduction in power consumption, uninterrupted water supply and increase in supply coverage. Therefore, the contract upon expiring in 2011 was not renewed, though the donor (World Bank) wanted it to be renewed. To satisfy the donor the government set up a subsidiary company of GWCL, Ghana Urban Water Limited (GUWL) in June 2012, to operate the urban water supply system. This situation poses a challenge to finding an efficient way of private participation in potable water supply.

### 7.3.2 Rural Water Delivery

The central government set up the Rural Water Development Department (RWDD) in 1948 to develop and manage rural water supply. The government established the Water Supply Division (WSD) under the MWH to manage rural water as well as urban water

supply in 1958. From 1965 to the early 1990s, the point sources of rural water supply were managed centrally by the then GWSC at the national level with branches at the regional level (GWCL, 2012b). The choice of water facilities was imposed on rural communities before the 1990s. The rural water facilities were provided by foreign aid agencies. The Canadian International Development Agency (CIDA) sponsored 2700 wells under the Upper Region Water Supply Project (URWSP) in 1973 in Northern Ghana. Then between 1979 and 1984, 3000 wells sponsored by the German government were provided to communities in Southern Ghana. However, the communities were not involved in the planning, construction and the management of the systems.<sup>198</sup> Not much attention was given to rural water supply until 1986 when the Rural Water Department (RWD) was created within the GWSC to focus more attention on the provision of water and sanitation to rural people. Ghana's development priorities then focused on improved rural water supply, sanitation, health and the control and eradication of water-borne diseases (CWSA, 2007).

**Table 7.5 The Development of Water Supply Organisations/Institutions for the Rural Sector**

Dates	Relevant organisation	Function/activity/purpose
1948	RWDD established	Engaged in development and management of rural water supply
1958	WSD of MWH established	Engaged in development and management of water supply
1965	GWSC	Responsible for water supply and sanitation
1986	RWD created within GWSC	Focused on rural water & sanitation
1987	Donors	Conference held on water & sanitation in Accra. Pledges invited from donors
1991	Government, development partners, NGOs	Kokrobite Conference held to prepare grounds for rural water & sanitation sector strategy
1994	CWSD-GWSC	RWD converted into CWSD within GWSC as agreed by the Kokrobite Conference to manage the implementation of NCWSP
1994	CWSD coordinates & facilitates implementation of NCWSP	NCWSP launched. CWSD coordinated & facilitated implementation, government's role to facilitation & monitoring reduced
1998	CWSA	CWSD transformed into CWSA and gained autonomous status (separated from GWSC) by CWSA Act 564, 1998

Source: GWCL (2012a; b); CWSA (2010; 2007); MWRWH/CWSA (2008).

The sustainability of water facilities that were provided depended on centralised support systems run by donor projects and government. Support from donors and the government waned and there was non-payment of tariffs by beneficiary communities resulting in little or no maintenance of the facilities by the centralised maintenance units of GWSC. Communities failed to take care of the facilities and eventually most of the facilities broke down.<sup>199</sup> The “demand-driven” approach was introduced into the rural water delivery

<sup>198</sup> Interview 33 (2009).

<sup>199</sup> Interview 33 (2009).



system. The Government then saw the need to work on education of the communities and to increasingly involve them in rural water delivery. Decentralisation and stakeholder participation were believed to facilitate the provision and sustainability of water facilities (MWRWH/CWSA, 2008).

The United Nations General Assembly declared the period 1981 to 1990 as the International Drinking Water and Sanitation Decade (CWSA, 2010; Snellen and Schrevel, 2004) to ensure that nations would prioritise attention to the delivery of water and sanitation facilities by the end of the decade. The logic (inspired by the water decade) that safe water supply would lead to improved health and productivity gains (Royal Danish Ministry of Foreign Affairs, 2002) influenced the decision that emanated from the consultation between the Government of Ghana and its development partners at a conference held at Kokrobite in Ghana in 1991. To keep pace with changing conditions on the international scene and to be in line with the government's decentralisation policy, a National Community Water and Sanitation Programme (NCWSP) was launched in 1994. This culminated in the creation of the Community Water and Sanitation Division (CWSD) within the GWSC. The CWSD was to implement the new policy of managing rural water supply separately from urban water supply and sanitation delivery under the framework of the NCWSP (MWRWH/CWSA, 2008; CWSA, 2007). See Table 7.5 for the organisational/institutional development in the rural water supply in Ghana.

The NCWSP emphasises community ownership and management, which entails community participation in the planning, implementation and management of water facilities in the belief that, as custodians, communities will ensure the sustainability of the water supply systems. The essential components of water coverage within the NCWSP are outlined as follows:

- There should be a water facility which provides all year round potable water to community members;
- Each person should have access to a minimum of 20 litres of water per day;
- Each spout of a borehole/standpipe should serve 300 persons and a hand-dug well should serve 150 persons;
- The maximum walking distance to a water facility should be 500 meters; and
- The water system should be owned and managed by the community through established structures

(CWSA, 2007; MWRWH/CWSA, 2008).

The CWSD was transformed into Community Water and Sanitation Agency (CWSA) in 1998 as the major player in rural water delivery (CWSA Act 564, 1998) (see also 5.4.2). This facilitated decentralisation and public participation in the rural water delivery system. The CWSA is decentralised with an office in each region. The Densu Basin covers large parts of the Eastern and Greater Accra Regions in Ghana so there are two offices of CWSA serving the Densu Basin. The CWSA has no district offices. The NCWSP is implemented through the DAs. Therefore, the concept of community management of water supply in rural communities and small towns places considerable responsibility on the DAs in ensuring that water services delivery is sustainable.

The ownership of small-town water supply facilities is vested in the DAs on behalf of the communities. The Water and Sanitation Development Boards (WSDBs) and Water and Sanitation (WATSAN) committees are set up within the communities with the authority of the DAs, which then vest in them (WSDBs and WATSAN committees) the power to manage the water system on behalf of the communities. District water and sanitation units are created within the District Assemblies. District Water and Sanitation Teams (DWSTs) who work in close collaboration with the regional CWSAs manage the units. A DWST comprises three officers: a Community Development Officer, an Environmental Health Officer and a Technician.<sup>200</sup>

The non-functioning of water facilities as a result of lack of ownership and maintenance called for the need for stakeholder participation to improve the maintenance of water facilities. It is believed that when communities own the water facilities and participate in the planning, implementation and management of the water delivery system they will ensure the sustainability of the water supply systems (MWRWH, 2008).

## **7.4 Activities of Stakeholders in Potable Water Delivery System**

### **7.4.1 Urban Water Delivery**

The policy of decentralisation in water management in Ghana took the form of private sector involvement in the urban water supply sub-sector. The Ghana Water Company Limited's (GWCL's) retreat from direct service provision in 2006 and bringing in of Aqua Vitens Rand Limited (AVRL) marked the transfer of operations, maintenance, distribution and revenue collection from the public to the private sector. The implementation of this strategy stayed in the pipeline for a length of time due to a number of reasons; one of which was the public debate on water as a human right and public good (Agyenim and Gupta, 2010).

The key actors in the urban water supply at the basin level were GWCL, AVRL, private water tankers and private agents at public stand taps. AVRL was responsible for the outsourced functions of the GWCL. The GWCL was the property owner, and it was responsible for the management of assets. Planning and development of the urban water supply system was done by GWCL in consultation with AVRL and the District Assemblies.<sup>201</sup> Participation of both GWCL and AVRL was intensive as they played key roles in decision-making processes at the national and basin/regional levels regarding management of urban water delivery. The involvement of the public in decision-making processes and implementation processes is minimal with respect to urban water delivery.

Domestic private entrepreneurs play a role in the operation of urban water supply systems by carrying out services such as transportation by tankers. Private water tankers collaborate with GWCL to supply water to urban communities that are not reached by the services of GWCL. Members of the private water tankers association fetch water from GWCL's metered water hydrants, pay to the association, which in turn pays to GWCL

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<sup>200</sup> Interviews 33, 34, 36, 37 (2009).

<sup>201</sup> Interviews 3 (2009), 88 (2010).

according to the meter reading. The private water tankers transport the water and sell to the people in unserved urban areas.<sup>202</sup>

GWCL has public stand taps for those in urban areas without home connections. The mechanism for paying is pay-as-you-fetch. Private agents at the stand taps collect money from those fetching the water on behalf of GWCL. The agents are paid by GWCL on commission – depending on how much revenue they collect. Such services are not covered by effective agreements and are seen as informal and ad hoc.<sup>203</sup>

## 7.4.2 Rural Water Delivery

### *Participation of CWSA and District Assemblies*

The CWSA provides technical assistance to the District Assemblies (DAs). The Regional Water and Sanitation Teams (RWSTs) from the Regional CWSA directly train and support the DAs to plan, implement and manage safe water services in rural areas.<sup>204</sup>

Rural potable water supply is heavily funded by external donors. The donors provide financial, technical and logistical support for the implementation of the NCWSP. They also participate in policy dialogue and lessons sharing, monitoring and evaluation. The government through the Ministry of Water Resources, Works and Housing, solicits funds from the external donors<sup>205</sup> for rural water delivery. Depending on how the donors or the developing partners want the project and what they offer, the CWSA, based on the information, finalises the agreement for each loan or grant. A project document is then developed which spells out the implementation strategy. The strategy involves giving the communities an informed choice as to which alternative they want; and they have to demand the facility.<sup>206</sup>

NGOs, communities, or any private body who wants to provide safe water to rural communities is required to pass through the Regional CWSA in order to follow the laid down guidelines, which include a demand-responsive approach; community ownership and management; and community contribution to capital cost.<sup>207</sup>

Figure 7.1 illustrates the procedure in establishing water facilities under the rural water delivery system. At the preparation stage, CWSA launches the project at the regional level in the presence of all regional and district political heads, donors, opinion leaders, CWSA staff and stakeholders. CWSA organises workshops to inform stakeholders. At the district level, the DA explains the benefits of the project and specifies the role of each stakeholder - the communities, CWSA, donors and the government. At both the regional and the district levels, the processes and procedures are explained. These include

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<sup>202</sup> Interviews 3 (2009), 88 (2010).

<sup>203</sup> Interviews 3 (2009), 88 (2010).

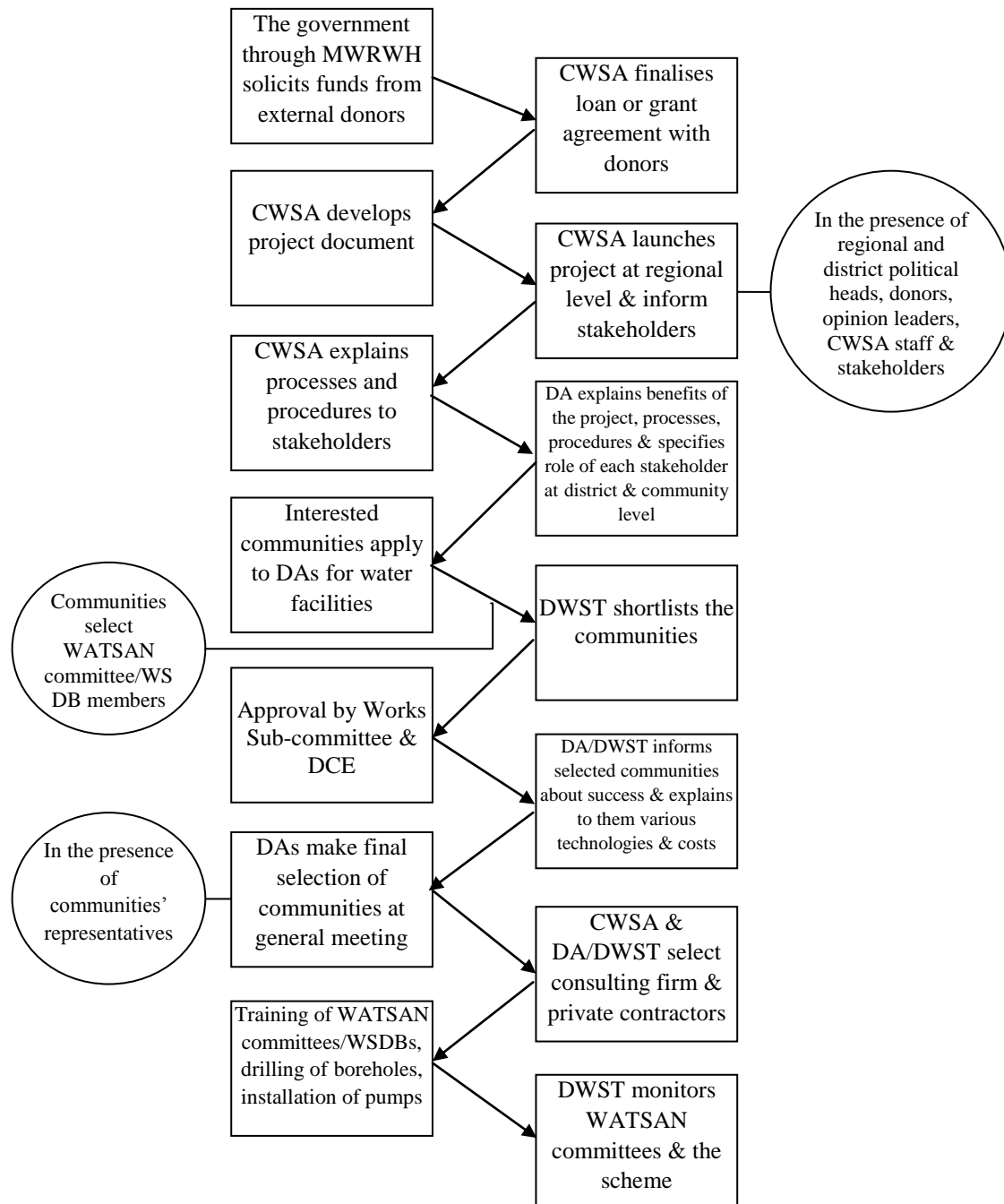
<sup>204</sup> Interview 85 (2010).

<sup>205</sup> Some of the donors are: DANIDA, World Bank, KfW, EU, UNICEF, JICA, CIDA, AFD, WVI and UNDP.

<sup>206</sup> Interviews 14, 15 (2009).

<sup>207</sup> Interviews 14 (2009), 85 (2010).

community contribution to the capital cost of the water facility;<sup>208</sup> and community responsibility for the operation and maintenance of the facilities after handing over (CWSA, 2007).<sup>209</sup> This process has the potential to ensure transparency and hence good governance (Videira et al., 2006; Resurreccion et al., 2004 also see 2.5.3).



**Figure 7.1 Procedure in Establishing Water Facilities under the Rural Water Delivery System**

<sup>208</sup> It is believed that contribution to capital cost of facilities by communities develops their sense of ownership of the facilities (Bekbolotov, 2007; Pahl-Wostl, 2002; Jonsson, 2005).

<sup>209</sup> Interviews 15, 33, (2009); FGD 25 (2010).

A similar event takes place at the community level where the District Assembly sends a group and explains to communities their roles and that of other stakeholders. They begin by sensitising the communities to the benefits of potable water; such as reduction in water borne diseases. Again all the processes and procedures are made clear. Different types of facilities as well as their costs are also explained; again ensuring transparency and hence good governance (see 2.5.3).<sup>210</sup>

With the demand-driven approach, the District Chief Executive (DCE) receives application for water facilities from interested communities and refers them to the DWST of the DA. The DWST shortlists the communities who are to benefit from those that apply based on: (a) the presence of a WATSAN committee; and (b) the existence of a bank account and the amount of money mobilised. In addition are (c) existing community initiated development projects; (d) the interest of the elders of the community; (e) the absence of conflicts such as land, chieftaincy and ethnic disputes; (f) population size; (g) existing facilities such as water and schools; and (h) current community economic activities. Those with old facilities, which they do not take care of, are not considered. The policy is to consider communities, which are actually in need of the facilities and those that show the ability to contribute, maintain, operate and manage the system.<sup>211</sup> This implies that if the policy were strictly implemented weak communities would be excluded from the provision of water. To prevent this from occurring the assemblies in some situations, assist such communities in the payment of the minimum contributions required to qualify for consideration. In other instances, some communities receive assistance from NGOs in this regard. This policy ensures fairness in the selection of beneficiary communities of the water facilities within the district. After the approval by the Works Sub-committee and the DCE of the District Assembly, the selected communities are informed by letters to the chief and the chair of the WATSAN committee and a copy to the assembly member to assist with the water facility. The DWST visits and informs the communities about the various technologies and their costs for them to make their informed choice.<sup>212</sup>

The DAs make a final selection of communities at a general meeting of the assembly during which the representatives of the communities (assembly persons) are present. The final selection is based on established general criteria agreed upon by all parties. (a) Choice of service based on readiness to pay five percent of the capital cost of the facility and acceptance of the responsibility to manage, operate and maintain the system. (b) Demonstration of effective demand in terms of willingness to contribute to capital cost backed by evidence of financial strength (bank statement). (c) Payment of half (2.5%) of the capital cost contribution before drilling; and (d) commitment to make land available and transfer ownership to the community (CWSA, 2007).<sup>213</sup>

CWSA, in conjunction with the DA/DWST, selects a consulting firm to give the WATSAN committees and the WSDBs their first training; a private contractor to drill the boreholes; and another private contractor to install the pumps. However, the DA/DWSTs lack personnel who have the necessary technological capabilities to select and also

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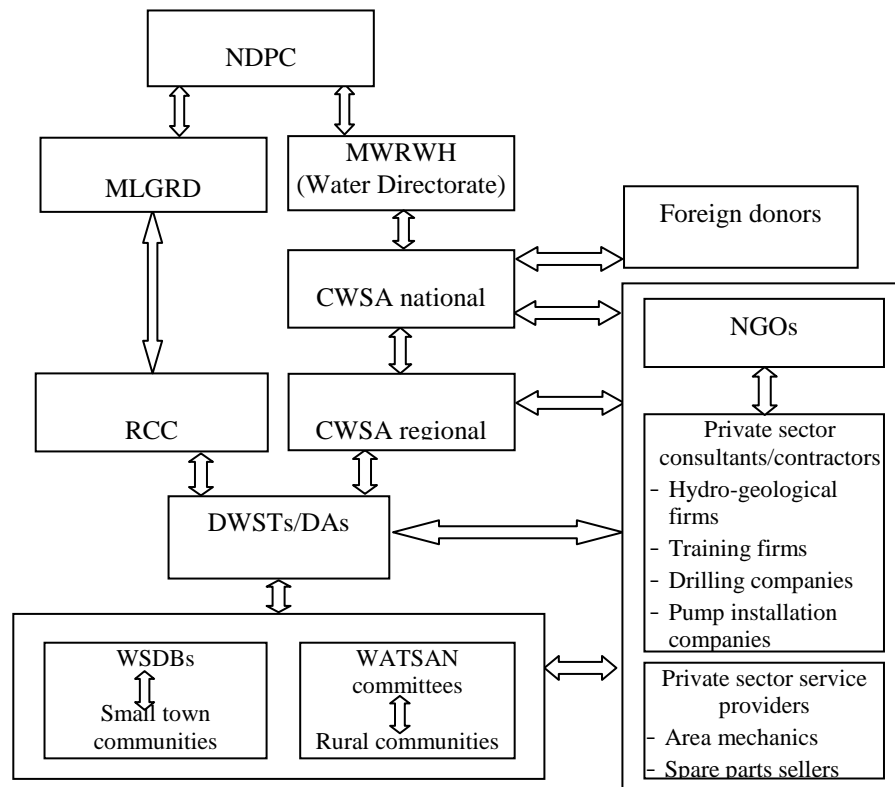
<sup>210</sup> Interviews 36, 37 (2009).

<sup>211</sup> Interviews 14, 33, 34 (2009).

<sup>212</sup> Interviews 34, 36 (2009).

<sup>213</sup> Interviews 33, 34, 36, 37 (2009).

monitor the contractors.<sup>214</sup> Figure 7.2 shows the operational structure of the rural water delivery scheme.



**Figure 7.2 Operational Structure of the Rural Water Delivery Sub-Sector**

Source: Constructed based on field data (2009/2010).

The WATSAN committees and WSDBs are supervised by the DWST of the DA. DWST and CWSA undertake technical and financial monitoring. DWST monitors the work of the WATSAN committees and sends a quarterly report to the Regional CWSA. During monitoring, the DWST checks all the books, bank notes of the communities (which the WATSAN committee is in charge) to see if they have enough money in their accounts, how much they have collected and how much they have spent. The DWST goes round all the borehole sites to assess the situation – whether the committees are functioning well or having problems.<sup>215</sup> When they find out that there are problems they meet and advise the WATSAN committee. Prior notice of the meeting is given to the WATSAN committee. If there is the need to meet the community, a meeting is arranged through the WATSAN committee by writing a letter to the WATSAN committee.<sup>216</sup> Participation of CWSA and DWSTs is intensive. This is because they are actively involved in decision-making and implementation processes and have managerial power in the rural water delivery scheme (see 2.5.7 and Figure 7.3 below).

<sup>214</sup> Interviews 14, 15, 37 (2009).

<sup>215</sup> Interviews 36, 37 (2009); FGDs 20 (2009), 25 (2010).

<sup>216</sup> Interviews 34, 36, 37 (2009); FGDs 20, 21 (2009).

### *Participation of Local Water Agencies and Communities*

With a rural water delivery system the belief is that local organisations and institutions are the best way of constructing and maintaining water supply facilities and providing water services with the underlying assumption that participation is the effective means of achieving water delivery and sustaining benefits to the poor (Kleemeier, 2000). In Ghana and in the Densu Basin, Water and Sanitation (WATSAN) committees are the local agencies that operate and manage small community-point sources. Water and Sanitation Development Boards (WSDBs) are the local agencies that operate and manage small town-piped schemes (CWSA, 2010). The communities, under the supervision of the DWST, elect publicly both WATSAN committee members and WSDB members.<sup>217</sup> The communities are, therefore, empowered politically and have the opportunity to exercise their democratic right (Schmitter and Karl, 2009; Mikkelsen, 2005 see also subsections 2.4.2 and 2.5.4). The local agencies in turn meet and select their leaders.<sup>218</sup> However, in few instances the WATSAN committee members are selected by consensus. At Apedwa-Tema in the East Akim District, the community appointed the WATSAN committee members. This is because the community sees them as being capable of managing the system as they have been in the lead organising the community.<sup>219</sup>

The composition of the WATSAN committees varies slightly from community to community. Basically each WATSAN committee has a chairperson, a secretary, a treasurer, a hygiene officer and a pump attendant. The positions of the treasurer and secretary require literate persons and this at times is a problem as 61.8 percent<sup>220</sup> of adults in the rural areas can neither read nor write in any of the local Ghanaian languages nor in English (the official language) (Ghana Statistical Service, 2008). The interviews<sup>221</sup> showed that the educational background of WATSAN committee members is in the range of no formal education and tertiary education (trained teacher).

Communities led by the opinion leaders (assembly person, chief and elders) first meet and discuss their interest in the community water and sanitation programme and then apply to the District Chief Executive (DCE) if they are interested.<sup>222</sup> Upon successful outcome of the application, members of the local water agency undergo training. The training covers:

- i) Financial management – on how to (a) prepare simple accounts; (b) transact business with the bank and save with the bank; (c) render accounts as well as record keeping;
- ii) Leadership training – (a) on how to take minutes of meetings; (b) in gender mainstreaming; (c) on how to organise community meetings and to meet frequently; (d) in community mobilisation; and (e) in data collection; and
- iii) Fund raising and maintenance of facilities.<sup>223</sup>

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<sup>217</sup> FGDs 1, 20 (2009).

<sup>218</sup> FGDs 1, 21 (2009).

<sup>219</sup> Interviews 34 (2009), 97, 98 (2010); FGDs 25 (2010).

<sup>220</sup> Illiteracy rate for women is 73.3% and for men is 49% in the rural areas.

<sup>221</sup> FGDs 1, 2, 3, 20, 21(2009), 25 (2010).

<sup>222</sup> FGDs 1, 3, 10, 19 (2009).

<sup>223</sup> Interviews 33, 36, 37 (2009).

During the training, the committee is given record keeping books. Pump attendants or caretakers and hygiene officers are given further training on how to carry out minor repairs and hygiene education respectively.

Special training is given to women WATSAN members to acquire special skills as leaders and combine their responsibilities at homes and as WATSAN committee members.<sup>224</sup> Women, due to cultural practices do not want to take on public positions (see Section 8.2). Women are encouraged to be members of the WATSAN committees because culturally they play a central role in water management. This quote from an interview with a member of a DWST shows the importance given to women in the management of the water delivery system.

“Gender is a factor that affects participation; the women initially do not participate but with constant education they get involved. We ask that at least one-third of WATSAN committee members should be women. Most of pump attendants are women. In some cases women are chairpersons of the committees and they perform”.<sup>225</sup>

The CWSA are by law (CWSA Act 564, 1998) required to support the DAs to encourage active involvement of the communities, especially women, in the design, planning, construction and community management of the rural water supply scheme.

The WATSAN committee and the opinion leaders (assembly person, chief and elders), on behalf of the communities, make informed decisions about appropriate choices of costs, appropriate technology option that gives them the highest service delivery that they want, can afford, and can operate and maintain.<sup>226</sup> The exception is in the Akwapim South Municipality where hand-dug wells are not suitable because of the nature of the underlying rock of the land.<sup>227</sup> The WATSAN committees, on behalf of the communities, submit proposals to their District Assemblies, which goes through a process of appraisal before the proposed facility is provided.<sup>228</sup>

There are basically three types of water facilities or technologies with different capital costs and one of each serves different sizes of population. These are:

- Hand-dug well fitted with hand pump which costs GH¢ 3,000 and serves a population of 150. This type is not suitable for places with low water tables as they become dry during dry seasons and are therefore not reliable at such places.
- Borehole fitted with hand pump which costs GH¢ 6,000 and serves a population of 300.
- Small town-piped scheme whose cost varies and depends on the network. It is constructed for populations above 3,000.<sup>229</sup>

Rainwater harvesting is a fourth type, which is not common, but these are constructed for areas where the chemical composition of the groundwater is not fit for human

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<sup>224</sup> FGDs 1, 3, 20, 21, 37 (2009), 25 (2010).

<sup>225</sup> Interview 37 (2009).

<sup>226</sup> Interview 37 (2009); FGDs 1, 21 (2009).

<sup>227</sup> Interviews 36 (2009), 106, 107 (2010).

<sup>228</sup> Interviews 33, 36, 37 (2009).

<sup>229</sup> Interviews 33, 37 (2009), but CWSA (2007) gives a population figure of 2,000 for small town-piped scheme.



consumption (e.g. presence of hydrogen sulphide and high iron content). It costs GH¢5,000 for serving small towns with 2,000 or more people.<sup>230</sup>

The communities use whatever means they are comfortable with to raise funds for the five percent capital cost. The WATSAN committee in consultation with the chief and his elders decide on the mechanism to use and inform the community. The WATSAN committee mobilises the community to pay the five percent. It is mostly by collecting a specified amount from each household.<sup>231</sup> Some communities in the cocoa growing areas in the Suhum-Krabo-Coaltar district use the 'kilo-by-kilo' system where the price of one kilo of cocoa is deducted from every cocoa farmer's proceeds. Those without cocoa farms pay a cash equivalent.<sup>232</sup> The community contribution varies but five percent is the standard. Some, in addition, provide materials and unskilled labour.<sup>233</sup> It is expected that the sense of ownership of the communities would be enhanced by paying part of the capital cost. The local water agency mobilises funds for a commitment fee and opens a bank account.<sup>234</sup>

Though the communities are involved in siting the water facilities, the chief and his elders and WATSAN committee members take the final decision but they are guided on engineering and technical issues by consultants (hydro-geological firm) and the CWSA.<sup>235</sup> Information provided by communities in siting water facilities helps to avoid inappropriate places such as (old) cemeteries and refuse dumps. For the Nankese piped system, the chief, his elders and the WSDB members planned the network distribution of the pipelines and selected where to site the point sources (stand taps). They (WSDB members, the chief and his elders) were also involved in the siting of the pumping machine and boreholes.<sup>236</sup> Photo 7.2 below is a photograph of the Nankese WSDB at the borehole and pump site.

The communities bear the entire operation and maintenance cost of facilities. The operation and maintenance cost is paid from money contributed by the communities. The communities decide on how much to pay and set their own rules for collecting payments. For the beneficiary communities studied, the rule is 'pay-as-you-fetch'. With this mechanism, the communities pay the caretaker each time they collect water from the point source.<sup>237</sup> In communities with piped systems such as Nankese and Akwadum, subscribers pay monthly through bills, the others pay-as-they-fetch from stand taps.<sup>238</sup> The price for an 18-litre bucket is 5Gp and for a 22 litre container locally called 'agbaa' is 10Gp<sup>239</sup> in all the communities studied.

However, at Nankese in the Suhum-Coaltar-Krabo district of the Eastern Region, at the time of data collection (2009/2010) the WSDB members were planning to increase the

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<sup>230</sup> Interviews 15, 33 (2009).

<sup>231</sup> Interviews 53, 54 (2009), 99, 100, 119 (2010), FGD 25 (2010).

<sup>232</sup> Interview 33 (2009).

<sup>233</sup> FGDs 20, 21 (2009).

<sup>234</sup> Interviews 14, 15 (2009).

<sup>235</sup> Interview 37 (2009), FGDs 20, 21, 18, 19 (2009).

<sup>236</sup> FGDs 21, 19 (2009).

<sup>237</sup> Interviews 52, (2009), 94, 98, 105, 110, 114, 118, 122 (2010), FGDs 1, 3 (2009).

<sup>238</sup> Interviews 47, 48, 51 (2009) FGDs 20, 21 (2009).

<sup>239</sup> 100 Gp (Ghana pesewas) = GH¢1.00.

prices because their operating cost was high and the amount of money collected could not cover it.<sup>240</sup> The technology type is small town-piped scheme, which uses electricity for pumping. The electricity bill raises the operation cost.



**Photo 7.2 Nanakese WSDB at Pump Site of Small Town-Piped System**

Source: Anokye and Gupta (2012).

Table 7.6 shows the role of the communities and the intensity of their participation in the rural water delivery scheme in the Densu Basin. Community participation in the basin takes place over a series of stages. At most of the stages in the water delivery process, participation is intensive (partnership or stakeholder control) in that the communities actively participate in the decision-making and implementation processes at the community level (see subsection 2.5.7). They influence decisions on technology type and location of point source of water facilities; and in addition decide on the mechanism used to collect money.

The WATSAN committees and the WSDBs are fully in charge of the operation and maintenance of the water facilities. The pump attendants or caretakers are responsible for the daily maintenance of the pumps. They clean the pump sites, take care of the facilities, and carry out minor repairs. Repairs beyond them are fixed by area mechanics at a fee. The attendants are paid commissions on the sales they make.<sup>241</sup> The WSDB of small town-piped system employs an attendant at each point source and a revenue collector who goes round the point sources and collects the daily sales from the attendants. The revenue collector, accountant, technician and security guard of small town-piped systems are paid

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<sup>240</sup> FGD 21 (2009/2010).

<sup>241</sup> FGDs 1 (2009), 25 (2010).

monthly wages. The WSDB members are on monthly allowances.<sup>242</sup> However, the work of the WATSAN committee members is voluntary.<sup>243</sup>

**Table 7.6 Role of Community and Intensity of Community Participation in Rural Water Delivery in the Densu Basin**

Stage		Role of local water agency & community	Intensity of participation
Decision-making process	Identification/prioritisation/needs assessment	Community is educated on the importance and benefits of having potable water facility.	Not intensive Therapy (Educated)
	Preparation of community scheme	Approve or reject proposal to have potable water facility	Intensive Partnership
		Express demand for and willingness to contribute to managing water	Stakeholder control
	Planning	Select technology and site point source and/or public stand pipe subject to approval of project technicians.	Intensive Partnership
		Community selects members of local water committee	Intensive Stakeholder control
		Decide on mechanism used to collect capital cost contribution	Intensive Stakeholder control
		Set water tariff	Intensive Stakeholder control
		Decide on mechanism used to collect water tariff	Intensive Stakeholder control
Implementation process	Preparation	Mobilise capital cost contribution	Intensive Stakeholder control
		Training & capacity building of local committee members & mechanics	Intensive (empowerment) Partnership
	Construction	Supply land, sand, stones and most unskilled labour.	Tokenism Low participation
	Operation & Maintenance	Fully responsible for funding, mobilises O&M cost contribution	Intensive Stakeholder control
		Fully responsible for provision of labour and organisation.	Tokenism Less Intensive
		Management and/or implementation of O&M activities	Intensive Stakeholder control
Monitoring	Monitoring	Provide DWST and CWSA with information.	Tokenism Less Intensive

Source: Constructed based on field data (2009/2010) analysis and Arnstein's (1969) ladder of participation.

<sup>242</sup> FGDs 20, 21 (2009).

<sup>243</sup> Interviews 34, 36 (2009), FGD 1 (2009).

The WATSAN committees together with the communities institute their own rules (bye-laws) to manage the water supply. Box 7.1 gives an example.

**Box 7.1 Bye-Laws Set by Apedwa-Tema WATSAN Committee and the Community to Manage Drinking Water Supply**

- Slippers or sandals are not worn at the point source;
- Very young children are not allowed to fetch water as they play with the pump and damage it;
- “First-come-first-serve” service;
- Pay-as-you-fetch, there is no exemption not even a WATSAN committee member;
- No vandalising of the padlock which is used to lock the standing tap; and
- Users are to respect and take instructions from the pump attendant.

Also at Akwadum, the WSDB does not allow washing, bathing and selling around the point sources. Waste water is not allowed to be directed towards the stand pipes.

Source: FGDs 20 (2009), 25 (2010).

WATSAN committees meet at least once a month to discuss their finances – income, expenditure and transfers to the bank. The chairperson or secretary goes round to inform and invite members to the meeting. The committee organises general meetings with the communities. Though these meetings are supposed to be held quarterly they are held twice or once a year due to time and logistical constraints. Announcement of general meetings is made through the gong–gong beater. The committees at times invite the DWST to the general meetings. They have the meetings on their taboo days, mostly in the mornings, soon after communal work. The taboo days are rest days for the communities where they do not go to their farms.<sup>244</sup>

At the general meetings, the WATSAN committee renders accounts, reports on assignments given and the next line of action. They also give feedback on visits by DWST or CWSA or any other body to the community.<sup>245</sup> Reports of these meetings are sent by the WATSAN committee to the DWST, the chief and assembly member.<sup>246</sup> These meetings are likely to bring about upward and downward accountability and, hence, good governance (Béné and Neiland, 2006; Resurreccion et al., 2004; see 2.4.4). Since the WATSAN committee members, WSDB members and to some extent the chiefs have more say in decisions taken than the community members that they represent, any lack of downward accountability can hamper participation and sustainability of the scheme.

The WSDB meets monthly. They submit quarterly report to the board of directors with a copy to the CWSA. The board of directors is made up of the District Planning Officer, District Auditor, District Chief Executive, District Coordinating Director, Area Council

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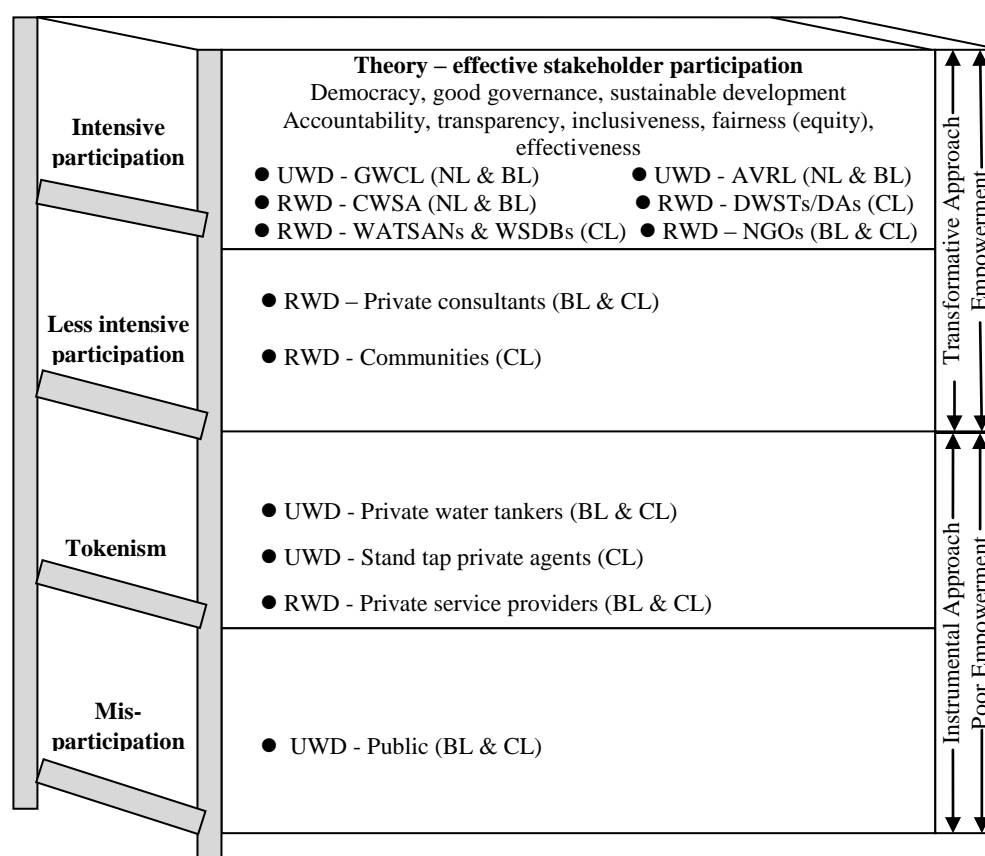
<sup>244</sup> FGDs 1 (2009), 25 (2010).

<sup>245</sup> Interviews 54 (2009), 100 (2010), FGDs 1(2009), 25 (2010).

<sup>246</sup> Interviews 33, 36, 37 (2009), FGDs 1(2009), 25 (2010).

Chairman of the area where the water facility is situated and chiefs of beneficiary communities.<sup>247</sup>

Figure 7.3 is the complex ladder of participation applied to the urban and rural water delivery systems and the participation of the different actors in the Densu Basin.



**Figure 7.3 Complex Ladder of Stakeholder Participation and Water Delivery in the Densu Basin**

Key: BL = Basin level; CL = Community level; NL = National level; RWD = Rural Water Delivery; UWD = Urban water delivery.

The local water agencies (WATSAN committees and WSDBs) play a major role in the rural water delivery system. The degree of participation is high at the level of intensive participation on the participation ladder (as illustrated in Figure 7.3). This is because the WATSAN committees and the WSDBs are actively involved in the decision-making, hiring of operations and maintenance (O&M) staff and the daily running of the facilities.

The level of participation of the communities is also quite high as they are involved directly and indirectly in decision-making and implementation processes of the planning and O&M of the water delivery system (see Figure 7.3 and Table 7.6 above). These findings supports Prokopy's (2005: 1802) argument that participants participate intensively when they “undertake their own initiatives, develop strong leadership roles, and are in full control of projects” but members of the local committee have more power

<sup>247</sup> Interviews 14, 28, 33 (2009), FGDs 20, 21 (2009).

than the ordinary community members in influencing affairs. Prokopy (2005) also considers the contribution of materials, labour and money as low level participation (tokenism); and attending meetings, involvement in siting key water facilities as middle level participation (less intensive in this case).

#### *Participation of the private sector*

Decentralisation in the rural water supply sub-sector includes privatisation and partnerships in the development of water supply facilities. There is promotion of private sector participation in assisting communities to construct boreholes and hand-dug wells; supplying pumps and spare parts; and providing maintenance and repair. There are private consultants providing technical assistance, these are: a) hydro-geological firms that carry out studies to identify areas where it is likely to hit water after drilling (that is siting of the facilities); and b) training firms that assist in training the WATSAN committees on how to raise funds and maintain the facilities. They train the DWSTs, the management staff of the assemblies and area mechanics as well.<sup>248</sup>

Area mechanics provide maintenance and repair services. They are people located in the communities and trained by the programme to repair boreholes when they breakdown at a fee. One area mechanic is in charge of the general maintenance of pumps in a whole zone comprising of a number of communities and lives in one of the communities. If the problem is beyond the capacity of the area mechanic, the company that trained the area mechanic is called in to deal with the problem.<sup>249</sup> There are private companies that sell borehole spare parts so the area mechanics can buy parts from them to repair the boreholes when they break down. Drilling and pump installation companies are engaged as contractors in drilling boreholes and installing facilities respectively.<sup>250</sup>

#### *Participation of non-governmental organisations*

NGOs are involved in providing potable water facilities to rural communities. The DAs are required to coordinate the activities of the NGOs. ADRA-Ghana cooperates with the CWSA and DAs in assisting farmers to construct hand-dug wells and boreholes. It follows the strategy laid down by CWSA that is the demand approach and community requirements. It provides materials for the construction of hand-dug wells and boreholes and trains WATSAN committees to manage the water facilities. ADRA also contracts hydro-geologists to do siting. ADRA is funded by USAID.<sup>251</sup> Christian Broadcasting Network (CBN) helps the less endowed communities to replace worn out parts of their machines in the Suhum-Krabo-Coaltar district.<sup>252</sup>

Safe Water Network (an NGO) through the Ga West Municipal Assembly contracted Water Health International (WHI) to provide potable water for small communities. It constructed a pilot water facility for Afuaman in the Ga West Municipal for free<sup>253</sup> (the

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<sup>248</sup> Interviews 15, 33, 37 (2009), FGD 1 (2009).

<sup>249</sup> Interviews 15, 34 (2009), FGD 25 (2010).

<sup>250</sup> Interviews 14, 33 (2009).

<sup>251</sup> Interviews 15, 18, 37 (2009).

<sup>252</sup> Interview 33 (2009).

<sup>253</sup> Interview 37 (2009), FGD 14 (2009).

community made no contribution to the capital cost). The scheme pumps water from surface water (Densu River) through pipes to a filtration pump, which is connected to a stand tap at the site. Unlike the other water facilities under the NCWSP, the WHI is in charge of operation and maintenance of the scheme and controls it as well. WHI sells the water to users.<sup>254</sup> The Afuaman community wants the scheme to be handed over to them but the WHI feels that the community will not be able to maintain and manage it, as they have no commitment towards it.<sup>255</sup> The community is not patronising it as much as it is expected. They complain that they were not consulted and also the source point is far from their houses.<sup>256</sup> Despite the fact that the communities were in need of the water they embarked on a collective action to protest their non-involvement in decisions that were to affect their lives.

### **7.5 Stakeholder Participation, Sustainability of the Rural Water Delivery Scheme and Socio-Economic Empowerment of Beneficiary Communities**

There are effective and sustainable rural water delivery facilities in the Densu Basin. This is partly due to the participatory roles played by the local water agencies and the DWSTs and the availability of local skills to operate and maintain the facilities. Pump attendants who have been trained by the water delivery programme carry out minor repairs; and area mechanics that have also been trained by the same programme carry out major repairs. These are local people who live in the communities. There are spare part outlets available where parts needed for the pumps can be purchased. The WATSAN committees carry out routine maintenance of the pump. They mobilise funds and save with the bank to have money for repairs and maintenance. Frequent monitoring of the facilities by DWST and CWSA has also contributed to the sustainability of the facilities. This result differs from the findings of Toner et al., (2006) and Rautanen et al. (2006) in Tanzania where they suggest that management by water users' associations or community water committees does not necessarily bring about sustainability.

The rural water delivery in the Densu Basin has contributed to the realisation of social and economic welfare of the people. Those who received training have developed their skills in accounting, book keeping, minutes taking, records taking, leadership skills, and, among others, have their self-esteem and efficacy increased.<sup>257</sup> Capacity building in the water delivery scheme, besides contributing to the sustainability of the water delivery scheme improves the social and economic life of the people. There is skill transfer. Some of the WATSAN members apply the skills they acquire in their own businesses; such as record keeping; and in transacting business with the bank and savings in the bank. This enhances their businesses. The skills acquired by area mechanics enable them to acquire other jobs.<sup>258</sup> The training of the programme has therefore empowered the WATSAN members and area mechanics socially and economically.

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<sup>254</sup> FGDs 2, 37 (2009).

<sup>255</sup> Interview 37 (2009), FGD 14 (2009).

<sup>256</sup> Interview 37 (2009), FGD 2 (2009).

<sup>257</sup> FGDs 1, 20, 21(2009), 25 (2010).

<sup>258</sup> FGDs 1 (2009), 25 (2010).

The water facilities have provided sources of livelihoods for some local people. They use the water for economic ventures such as palm oil extraction and gari<sup>259</sup> processing at Djankama in the Akwapim South Municipality of the Eastern Region;<sup>260</sup> “chop bars” (indigenous restaurants); and selling of “iced water” at Nankese in the Suhum-Krabo-Coaltar (S-K-C) District of the Eastern Region.<sup>261</sup> Perceptions of officials<sup>262</sup> in the Eastern Region also indicate that the number of small-scale enterprises that rely on water as one of their main inputs has gone up partly due to increased coverage of water supply. The number of small-scale food processing enterprises increased from 130 in 2006 to 220 in 2009 in the S-K-C District. These are mainly gari, palm oil, and palm kernel oil and corn dough processing establishments. Akpeteshie<sup>263</sup> distillers also increased from 307 in 2006 to 600 in 2009 in the same district (S-K-C DA, 2010). The basic rights of local people are met in the form of having access to potable water and in the process the economic welfare of the local people is enhanced.

In some of the communities, Adderman and Akwatsri in the Ga West District of Greater Accra Region, the livelihoods of members have improved as a result of reduced incidence of water borne and water related diseases.<sup>264</sup> Their improved health is due to their accessibility to safe drinking water provided by the rural water delivery scheme. They do not get sick often and are able to attend to their work. Their productivity is increased as well as income. Their social life as well as economic life has improved.<sup>265</sup> Table 7.7 uses reported cases of water borne and related diseases as a proxy for the incidence of water borne and related diseases to show improved health in the two main regions in which the Densu Basin lies since the inception of the NCWSP in 1994.

Before the communities were supplied with water facilities, women and children spent hours hauling water from distant sources, using time that might otherwise be spent on more productive activities.<sup>266</sup> A community called Miawani in the Eastern Region used to travel 15 km to fetch water in the dry season. They set off at 2am with lanterns.<sup>267</sup> Again, at Adwumapa in the New Juaben Municipality of the Eastern Region, the community no longer walk long distances to fetch water after the provision of the water facilities.<sup>268</sup> Time for searching for water is reduced and the quality of water has improved. The women have more time for their productive activities; children spend more hours in school.<sup>269</sup> Government workers such as teachers do not refuse postings to such communities.<sup>270</sup> The active participation of the communities in the decision-making process and implementation of the water delivery scheme enhances their acceptance of

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<sup>259</sup> Gari is roasted grated cassava.

<sup>260</sup> Interviews 36 (2009), 106, 107 (2010).

<sup>261</sup> Interviews 49, 50 (2009).

<sup>262</sup> Interviews 28, 33, 36 (2009), 90 (2010).

<sup>263</sup> Akpeteshie is a local gin prepared from palm trees.

<sup>264</sup> Interviews 37 (2009), 117, 118, 121 (2010).

<sup>265</sup> Interviews 37 (2009), 119, 120, 122, 123 (2010).

<sup>266</sup> Interviews 34, 36 (2009).

<sup>267</sup> Interviews 109, 110 (2010).

<sup>268</sup> Interviews 113, 115, 116 (2010).

<sup>269</sup> Interviews 33 (2009), 111, 114 (2010).

<sup>270</sup> Interviews 112, 114 (2010).



the policy of community operation and maintenance and their commitment to the success of the scheme and hence the effectiveness of the scheme.<sup>271</sup>

**Table 7.7 Reported Cases of Water Borne and Related Diseases as Percentage of All Reported Cases of Diseases (1990-2009) (%)**

Region	Diseases	1990	1995	2000	2005	2009
Eastern Region	Diarrhoeal Diseases	6.592	4.237	4.359	3.725	3.546
	Schistosomiasis (Bilharzia)	0.544	0.358	0.213	0.159	0.140
	Guinea Worm	0.769	0.015	0.014	0.002	0.00004
	All Other Diseases	92.095	95.39	95.414	96.114	96.313
	Total	100.00	100.00	100.00	100.00	100.00
Greater Accra Region	Diarrhoeal Diseases	6.584	4.333	4.090	3.835	3.090
	Schistosomiasis (Bilharzia)	0.151	0.123	0.049	0.032	0.039
	Guinea Worm	0.2116	0.0019	0.0021	0.0002	0.000
	All Other Diseases	93.0534	95.5421	95.8589	96.1328	96.871
	Total	100.00	100.00	100.00	100.00	100.00

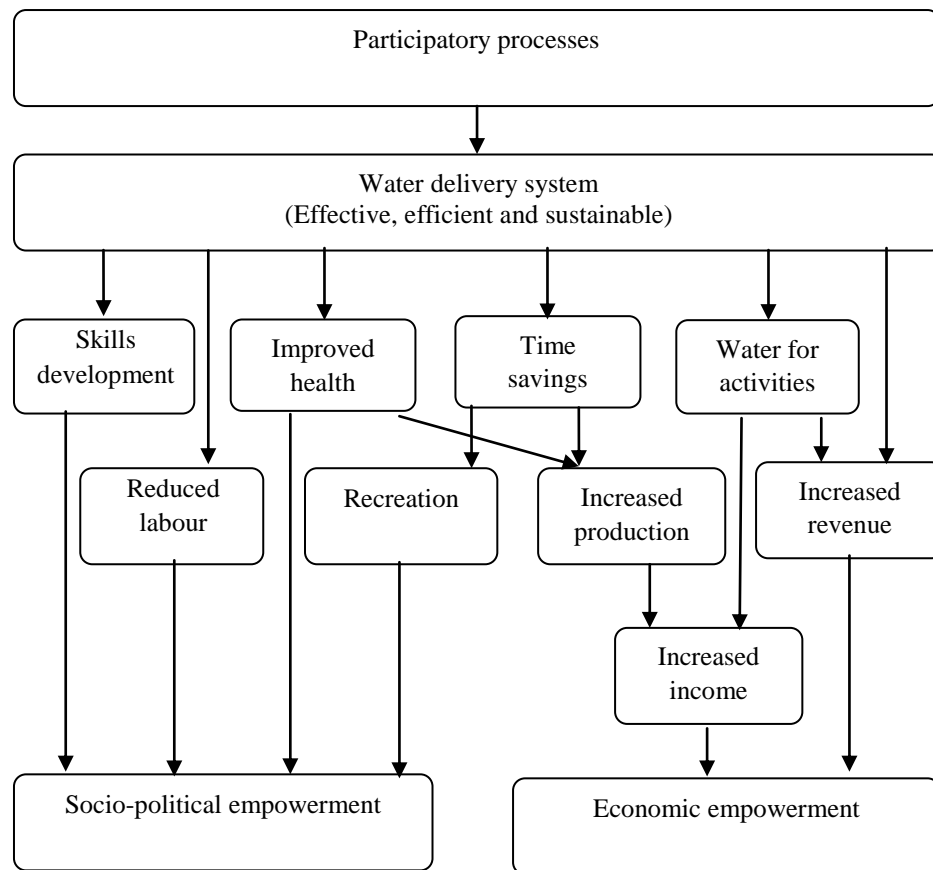
Source: Calculated based on figures obtained from the Centre for Health Information Management, Ghana Health Services (2010).

The outcome of the participatory processes corroborates with those of an impact assessment study of the rural water delivery scheme carried out in rural and peri-urban settings in Southern Ghana including the Ga West and East Akim Districts. Based on the beneficiaries own perceptions as well as from comparison with control communities, the study concluded that provision of safe drinking water has made a significant difference to people's daily lives. This is manifested by (a) reduction in workload, time and stress associated with fetching water; (b) improved health and hygiene; and (c) having a range of more indirect impacts on schooling and income generation (CWSA, 2008). A model adapted from Anokye and Gupta (2012) illustrates the outcome of the participatory process (see Figure 7.4).

The participatory approach in the rural water delivery system is a mixture of instrumental and transformative approaches. It is instrumental because community participation was employed in the planning, implementation and management of water facilities to achieve effective, efficient and sustainable rural water delivery facilities (Neef, 2008; Hooper, 2005; refer to subsection 2.5.5) whereby there is O&M cost recovery; and maintenance and care of the water facilities by the communities. The approach is also transformative in that participation has empowered the communities and there is good governance as well as legitimacy (Mohan, 2008; Hickey and Mohan, 2005; Oakley, 1991; refer to subsection 2.5.5). The communities have the power to (a) select their leaders (local water agency members); (b) select the type of water facilities that they can afford and also serve their

<sup>271</sup> Interviews 14, 15, 33, 34 (2009).

need; (c) select the site for the water facility; (d) take decisions on how to raise funds for the five percent capital cost and for operation and maintenance of water facilities; (e) set rules regarding management of the drinking water; (f) have their skills developed for managing the water scheme and for their own good economically.



**Figure 7.4 Outcome of Participatory Processes Through Rural Water Delivery System on Communities**

Source: Constructed based on field data (2009 and 2010) analysis and Anokye and Gupta (2012).

Does stakeholder participation matter in bringing about effectiveness in terms of water delivery systems in the Densu Basin? Table 7.8 shows whether participation has been effective or not effective based on the indicated criteria. The analysis shows that stakeholder participation matters as far as effectiveness of water delivery is concerned. This has been the main source of differences between rural water delivery system and urban water delivery system. Whereas local participation has led to improved rural water delivery system, limited or no public participation in urban water delivery system has resulted in relatively very poor outcomes.

**Table 7.8 Effectiveness of Stakeholder Participation in Water Delivery System**

Programme	Effectiveness criteria	Findings/Experience/indicators	Effectiveness
Rural water delivery (NCWSP) - government initiative and demand-driven	Level of success in achieving objectives	sustainable rural water delivery facilities	Effective
	Quality of the decision-making process	WATSAN committees & WSDBs make decisions on behalf of communities	
	Sense of ownership	High sense of community ownership	
	Meeting the needs of stakeholders	Communities access to potable water; type of facility they can afford; offer them good services & can be easily maintained	
Urban water delivery – No public participation	Level of success in achieving objectives	PPP did not meet target set	Not effective
	Quality of the decision-making process	Poor, does not involve the public	
	Sense of ownership	Nil	
	Meeting the needs of stakeholders	Public against PPP	

## 7.6 Problems Encountered in the Rural Water Delivery Scheme

The rural water delivery system seems to be successful in the basin but there are problems hampering its sustainability. The problems include those indicated in Table 7.9. There are problems related to local agency. a) The work of the WATSAN committee is voluntary. As a result, some of the members do not show interest, as they are not motivated. They start off enthusiastically and relax later as in the case of Nsakina in Ga West District.<sup>272</sup> b) There is lack of accountability on the part of WATSAN committee members.<sup>273</sup> Community participation sometimes breeds conflict when people with different ideas form a committee (Mohan, 2008; Njoh, 2002). Disagreement on payment of money and embezzlement of funds by some members brought conflict within the WSDB (Akwadum) and loss of confidence by the community in the WSDB.<sup>274</sup> c) There is inability to keep enough funds by some WATSAN committees for operation and maintenance of water facilities.<sup>275</sup> d) The low level of education among WATSAN committee and WSDB members affects their training, understanding of issues and record keeping.<sup>276</sup>

There are problems related to external agencies. The electricity company for instance piles the electricity bill for the pumping machine of Nankese and Akwadum piped water

<sup>272</sup> Interviews 37, 69, 70 (2009).

<sup>273</sup> Interviews 33, 36 (2009).

<sup>274</sup> FGD 18 (2009).

<sup>275</sup> Interviews 33, 37 (2009).

<sup>276</sup> Interviews 34 (2009), 36, 37 (2010).

system for as long as four years. This affects the planning and setting of water tariffs by the WSDBs.<sup>277</sup>

**Table 7.9 Problems Encountered in the Rural Water Delivery System**

Source	Related to Participation	Related to Other Issues
Local water agency	Voluntary; not enough motivation; lack of interest. Lack of accountability. Low level of education of some members. Disagreement on payment of money leading to conflict within agency. Embezzlement of funds by some members of local agency leading to loss of confidence by the community.	Inability to keep enough funds by some local agency for O&M.
Outside agency		Delay in submission of electricity bills affects planning and setting of water tariff.
NGOs	Non-cooperation by some NGOs affects coordination	
Interference from politicians	Community unable to mobilise money for O&M of water facilities	Politicians impose the facility on the communities by paying for the communities capital cost contribution
Poor communities	DAs have tight budget to assist poor communities. Difficulty in distinguishing between really poor communities and communities that cannot mobilise themselves to raise the 5% capital cost.	
DAs	DAs lack of technical capabilities to monitor contracted technical firms requires regional CWSA to assist.	
Households	Close proximity of polluted source of water to community reduces participation in safe water	Payment of water bills by subscribers is not regular (house connection)
Geology of area		Unsuccessful drilling

Source: Field data (2009/2010).

Some of the problems are due to outside influence such as interference from politicians. Politicians promise to pay maintenance costs but deceive the communities after getting their votes. In some cases, the politicians pay only the “capital cost contribution” for the community; and after that, the community finds it difficult to mobilise money for the maintenance of the pumps leading to unsustainable water scheme. There are also instances where politicians impose the facility on the communities without communities’ interest.<sup>278</sup>

<sup>277</sup> FGDs 20, 21 (2009).

<sup>278</sup> Interviews 14, 33, 34 (2009).

There is a tight budget of DAs and difficulty in identifying poor communities. The very small and poor communities are unable to raise money for the five percent capital cost and, hence, cannot afford to be provided with potable water facility. The DAs are to assist the communities that cannot afford to pay the five percent capital cost. However, the DAs have difficulty here. First, the DAs have a very tight budget and, second, they find it difficult to distinguish between communities that really cannot afford the costs and those that are simply not able to mobilise themselves to raise the money.<sup>279</sup>

There are instances of unsuccessful situations where no water was obtained after drilling in parts of East Akim and Akwapim South Municipalities due to the geology of the area.<sup>280</sup> A groundwater assessment study by WRI-CSIR (2003) shows that the underlying rocks of these areas: granite, granitic gneiss and schistose lithologies, are impermeable and have limited storage capacity within their matrix. Fractures are unidirectional and interconnected groundwater bodies do not form. Therefore isolated water filled cracks provide limited amount of water.

There is lack of cooperation by some NGOs that assist with provision of water facility. The Christian Broadcasting Network (CBN), for instance does not report to the Suhum-Krabo-Coaltar DA about their activities in the district. This affects coordination by the DA.<sup>281</sup>

Some Faith-Based Organisation such as the Latter Day Saints changed the pumps, which DWST and CWSA have installed without consulting the DWST. One of the interviewees had this to say “their (the Latter Day Saints) real motives were not known. May be their intention was to obtain our pumps which were of good grade for something else. They also took pictures of the borehole sites and probably sent them to their donors for funds”.<sup>282</sup>

Sometimes it is difficult to convince some communities to contribute for the provision of potable water facilities. They prefer using the polluted rivers. The Ntaabea community in the East Akim Municipality for instance, prefer using the polluted river, because of the proximity of the polluted river to the community.<sup>283</sup> The constructed water facility is further away from the community than the polluted river.

## **7.7 Inferences**

The chapter shows that private sector participation was introduced in the urban water delivery system to ensure an effective and efficient water supply service. However, stakeholder participation in urban water supply was limited to GWCL, PURC, external donors and the private operator (AVRL). The public is only informed about decisions taken and debate on public policy choices is not actively encouraged.

The NCWSP has developed considerable strategic perspectives on advancing decentralisation of the rural water supply sub-sector. The rural water supply programme

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<sup>279</sup> Interviews 14, 33, 34, 36, 37 (2009).

<sup>280</sup> Interviews 34, 36 (2009), FGD 12 (2009).

<sup>281</sup> Interview 33 (2009).

<sup>282</sup> Quote from interview 34 (2009).

<sup>283</sup> Interviews 34 (2009), 93, 94 (2010).

is implemented at the lowest level by the District Assemblies through the DWSTs set up by the programme and WATSAN committees and WSDBs formed by communities. The degree of participation of these local water agencies is high at the level of intensive participation on the participation ladder because of their active involvement in the decision-making and implementation processes of the water delivery system. The level of participation of the communities is also quite high. The participatory approach in the rural water delivery system is a mixture of transformative and instrumental approaches. The approach is transformative in that participation has empowered the communities and there is transparency and good governance in the management of the scheme. It is also instrumental because community participation employed in the planning, implementation and management of water facilities made use of resources of the communities to achieve the project objectives of an efficient, effective and sustainable rural water delivery system. However, the programme relies heavily on external donor funds. These donors participate in policy dialogue and may influence policy and the projects.

The rural water delivery sub-sector has made the following achievements: First, it has an extensive approach to participatory planning and community participation that encompasses high levels of public accountability and empowerment; commitment at the local level; and sustainability of water facilities. Second, the democratic rights of communities are enhanced by having the power to select members of water committees to represent them and the most appropriate type of facility taking into consideration the five percent capital cost and how much they can afford; and the type that can offer them good services and can be easily maintained. Third, access to drinking water in the rural areas has been strengthened by the strategy of community participation, ownership and training of the water committees in (i) mobilising people and money for improved water supply; (ii) developing management plans; and (iii) operating, maintaining and undertaking basic financial management of the resources associated with their community water supply. Fourth, these efforts (the training) have resulted in the development of human capacity for decision-making at very basic levels.

However, the community water and sanitation programme faces challenges. First, as mention earlier, competency constraints at the local level generated by the DWSTs' lack of required technological capabilities to select and monitor the contracted private firms leads to an over reliance on the regional CWSA. The second is motivating the voluntary WATSAN committee members for them to be interested in performing their roles. The third is inability to keep enough funds by some WATSAN committees for operation and maintenance of water facilities. The fourth challenge is that the Assemblies have difficulties in preventing politicians from imposing the facility on communities without communities' interest. Fifth, the very poor communities are unable to access the safe drinking water because of their inability to contribute the five percent capital cost. The DAs are supposed to assist such communities but they also have money constraints. Sixth, the DAs also have difficulty in distinguishing between really poor communities and communities that cannot mobilise themselves to raise the money.

On the whole, rural water delivery systems, managed by communities are more sustainable than those managed centrally by the Ghana Water Company Limited because of better maintenance, monitoring and institutional support as well as participation of key stakeholders.

## 8 The Influence of Socio-Cultural and Economic Environment on Stakeholder Participation in the Densu Basin

### 8.1 Introduction

Many factors influence stakeholder participation. The socio-cultural setting of a place is known to have effect on stakeholder participation in natural resource management including water management (Neysmith and Dent, 2010; Enserink et al., 2007). The present chapter examines the influence of the traditional governance system and economic setting on participation and whether they facilitate or impede participation. Questions raised are: How intensive and transformative is the participation of the people under the socio-cultural and economic settings in the Densu Basin? What form does the traditional governance system take? How does irrigated vegetable farming and fishing motivate the communities to participate in water management? What are the problems facing participation in the management of water in the economic activities? The methods employed to address these questions include group, individual and key informant interviews, document review and observation. Section 8.2 discusses the traditional governance system on local participation. Section 8.3 concerns the two main water related economic activities in the basin: irrigation and fishing, and stakeholder participation. Section 8.4 presents inferences drawn from the chapter.

### 8.2 Socio-Cultural Settings

In the Densu Basin and in Ghana as a whole the traditional governance system in the rural settings is rooted in the socio-cultural structure and controlled by traditional norms and institutions. The traditional authorities are institutions that govern the towns and villages where they are located. The interviews,<sup>284</sup> Kendie and Guri (2010) and Mahama (2009) verify the following assertion made by Guri (2008 ([http://www.kas-benin.de/ghana/Chieft\\_Res.html](http://www.kas-benin.de/ghana/Chieft_Res.html))):

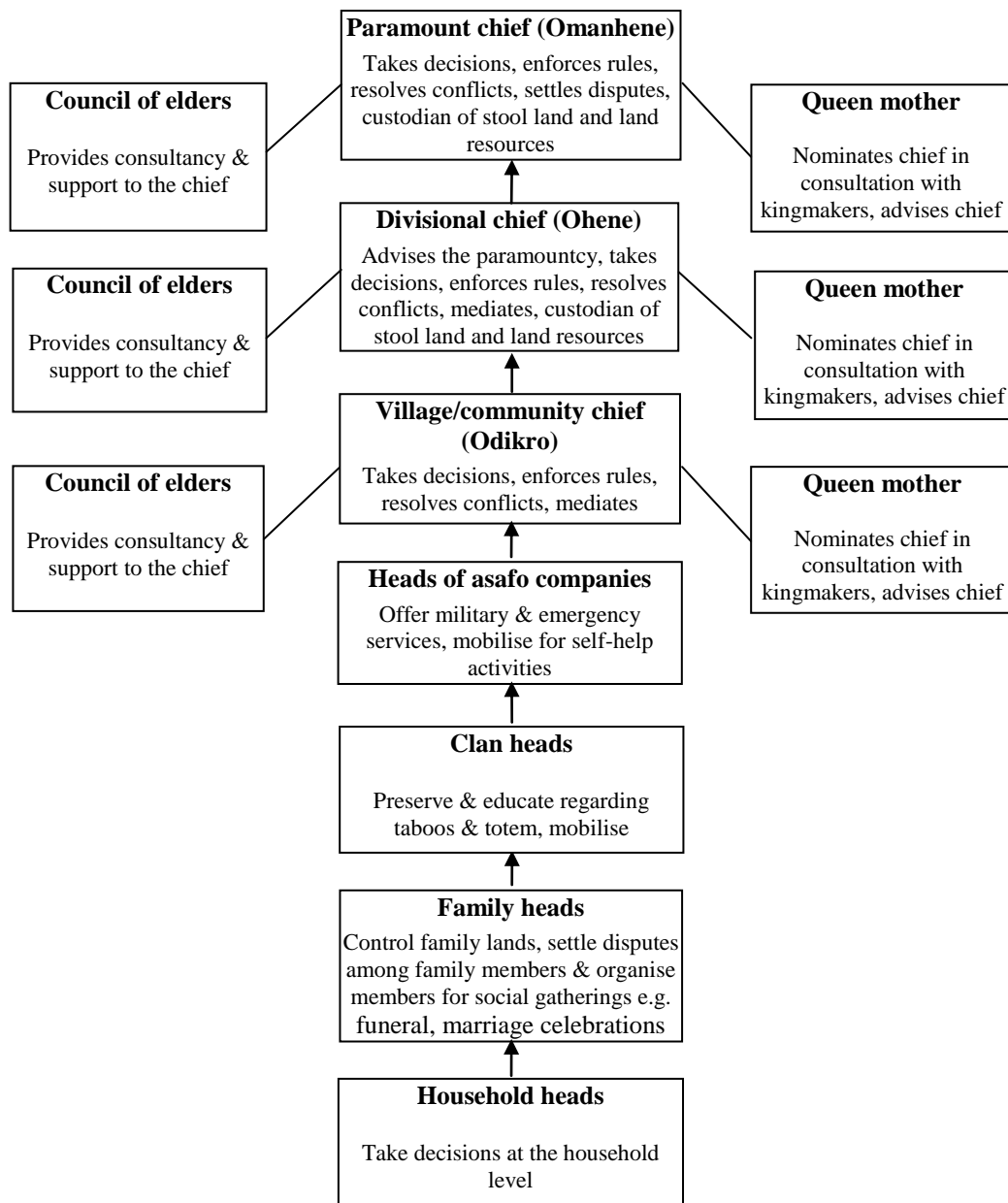
“There is empirical evidence that in Ghana at least 90% of ordinary Ghanaians (both rural and urban) believe and depend on our traditional authority system for organising their lives. The traditional authority system still remains the defacto governance system as the state and its institutions have still not penetrated into the bulk of the population yet”.

The traditional authority system includes chiefs; queen mothers; linguists; family, lineage or clan heads; heads of asafo companies; and fetish priests and priestesses (Guri, 2006). The chiefs are traditional rulers and heads of the traditional authorities. At each level of chiefship is a queen mother, a linguist<sup>285</sup> and a council of elders. The queen mothers are the female counterparts of the chiefs and together are supported by the council of elders. The greater part of the Densu Basin lies within the Akan traditional areas. The structure of the Akan traditional political system is decentralised and represents a hierarchical order of office holdings and related responsibilities (see Figure 8.1).

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<sup>284</sup> Interviews 16, 56, 57, 77, 80 (2009), FGDs 11, 12, 16, 19 (2009).

<sup>285</sup> A linguist is the equivalence of a spokesperson.



**Figure 8.1 Hierarchy of Authority and Responsibilities in the Akan Traditional Setting in the Densu Basin**

Source: FGDs 10, 11, 15, 16, 17 (2009).

The traditional leaders are opinion leaders on issues pertaining to the areas under their jurisdiction. They have customary legitimacy and therefore command a lot of influence in their areas. Referring to Figure 8.1 and the functions played, the intensity of participation of the chiefs and council of elders is high at the level of intensive participation. Their functions are discussed further below. Their participation is also transformative as it entails empowerment. The chiefs and their council of elders take most of the decisions.<sup>286</sup>

<sup>286</sup> FGDs 10, 11, 14 (2009).



This is similar to what Cleaver and Toner (2006) refer to as leadership type of participation where leaders take decisions on behalf of the community. However, the hierarchies are circumscribed; they entail performance-based accountability to the communities by the traditional authorities.<sup>287</sup> The heads of clans and asafo companies are empowered by the cultural norms to take decisions in performing their roles and functions. Their participation is therefore transformative. They are accountable to the families that they control.<sup>288</sup>

Power distance, as explained by Enserink et al. (2007), between the chief and his council of elders is low in relation to that between the traditional authorities and the community members (which is high). Participation in decision-making by the community members is low. This corroborates with Enserink et al.'s argument (2007) which says that cultures characterised by high power distance are unlikely to accommodate participation. However, community participation is high in implementation processes. The chiefs are able to use their powers to mandate the communities to participate in communal labour in activities including water resources management activities like desilting of streams in the dry season.<sup>289</sup>

The seat of the chief is known as the stool. The stool is the “soul” of the community (Kendie et al., 2004) and it unifies the community. The community strongly upholds allegiance to the stool and pays reverence to it. This provides the source of power to the chief. The allegiance and reverence to the stool and the unity of the community translate into unquestioned participation in community activities.<sup>290</sup> This situation is underpinned by the social identity theory or a feeling of belongingness also referred to as collective identity discussed in Section 2.6 (Neysmith and Dent, 2010; Rowley and Moldoveanu, 2003). The people also accept and follow norms of behaviour that lead them to feel obliged to participate in community activities.<sup>291</sup> This emanates from the strong roots that the people have in their communities and are therefore committed to participate in communal activities that bring development to the communities.<sup>292</sup> For these reasons, the chiefs command power and are able to execute mandatory communal labour. The chiefs have influence on decisions made at the community level. They play an effective role in community initiatives, community planning and resource mobilisation for development.<sup>293</sup>

The intensity of participation of the chiefs and their council of elders are presented in Figure 8.2 on the complex ladder of participation. The low participation in decision-making by the community members is also presented in Figure 8.2.

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<sup>287</sup> FGDs 11, 12, 17, 18 (2009).

<sup>288</sup> FGDs 11, 13, 18, 19 (2009).

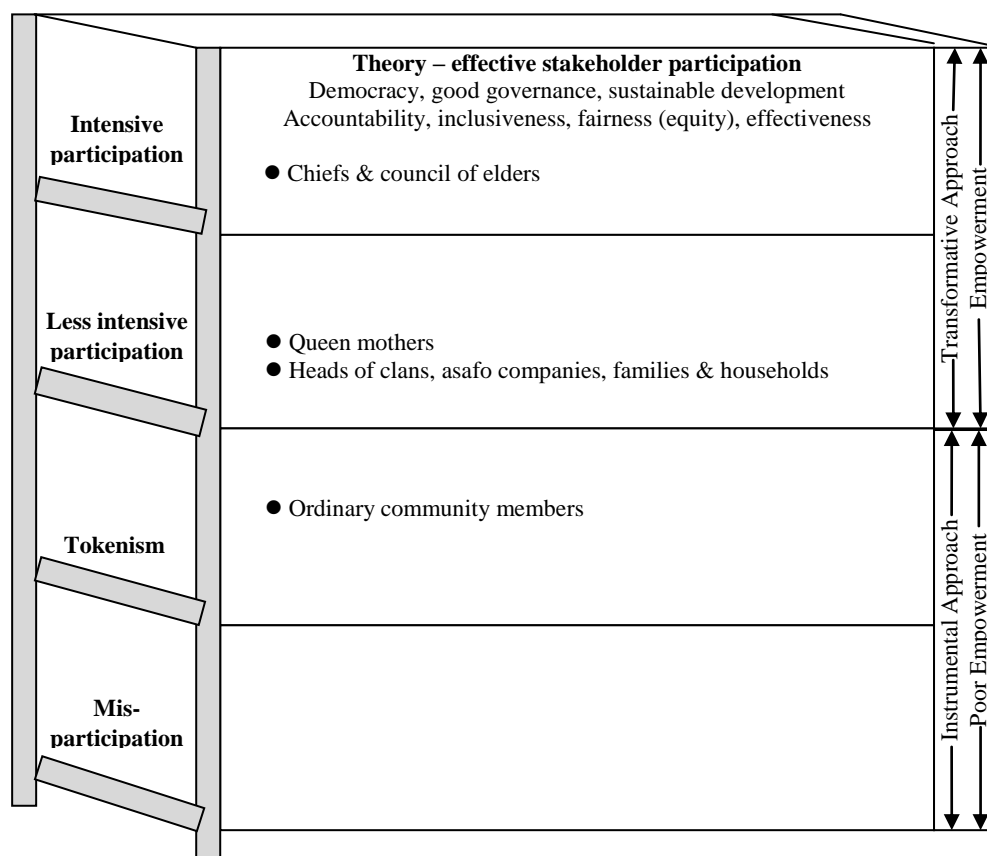
<sup>289</sup> Interviews 54, 61, 62 (2009), FGDs 10, 12 (2009).

<sup>290</sup> Interviews 71, 72, 75 (2009), FGDs 13, 14, 15 (2009).

<sup>291</sup> Interviews 56, 57, 58, 59 (2009), FGD 11 (2009).

<sup>292</sup> Interviews 52, 53, 58, 59 (2009), FGD 5 (2009).

<sup>293</sup> Interviews 58, 59, 78, 80 (2009), FGDs 11, 16 (2009).



**Figure 8.2 Application of the Complex Ladder of Stakeholder Participation to Stakeholders in Developmental Activities in the Traditional System**

The selection of a chief is a combination of democracy and hereditary processes. Nomination of the prospective candidate is by consensus and approval of the kingmakers.<sup>294</sup> The queen mother in consultation with the kingmakers nominates a royal from those eligible to occupy a vacant stool. The queen mother performs this function in secrecy. This might be in conformity of the norm that women are not to be seen raising their voices in public gathering when men are present. There are expected qualities of the aspirant that guide the selection. These include commitment to the values, norms and ideals of the community, courage, benevolence, observance of taboos and good character of the candidate. Other qualities are the personal qualities of transparency, physical ability and marital fidelity.<sup>295</sup> The queen mother is important in the political and administrative ordering of the community; she does a lot behind the scenes. She is accountable for the

<sup>294</sup> The kingmakers are people who have good knowledge of the royal lineage, control appointments to chieftaincy positions and install chiefs.

<sup>295</sup> FGDs 10, 11, 12, 13, 18, 19 (2009).

correct interpretation and application of the criteria for nomination, endorsement and installation of the chief. She also acts as an adviser to an incumbent chief.<sup>296</sup>

The chiefs, in consultation with the council of elders, make, interpret and enforce rules governing the social, economic and political life of the communities, including the use of water resources. With regard to water resources, they institute rules to guard forests and rivers, to prevent pollution, preserve and to keep the quality of the water. Some of the rules to protect water bodies are presented in Box 8.1.

**Box 8.1 Rules Instituted by Communities to Protect Water Bodies**

- Weeding close to the river bank is not allowed (example of communities with such rule are Kibi-Apapam and Densuano).
- Washing and bathing are not allowed in the rivers (example of communities with such rule are Kibi-Apapam and Akwadum);
- Slippers/sandals are not to be taken to the river side (example of community with such rule is Akyem Asafo);
- Defecating is not allowed near rivers (example of communities with such rule are Akwadum, Kibi-Apapam and Adoagyiri);
- A woman in her menstrual period is not allowed to go to the river (example of communities with such rule are Densuano, Afuaman, Nsakina, Sakyikrom and Weiija);
- Black pots and cooking utensils are not allowed in the river (example of community with such rule is Densuano);
- Calabash is not allowed in the river. The reason being that a calabash is used to perform rites for the river god so the use of calabash in fetching water means one is challenging the river god (example of community with such rule is Weiija); and
- No red material or anything red is to be taken to the river (example of community with such rule is Weiija).

Source: Interviews 43, 44, 45, 46, 52, 58, 59, 68, 78 (2009); FGDs 10, 11, 12, 13, 14, 15, 16, 17, 18 (2009).

Defaulters are sanctioned by the chief in consultation with the fetish priest/priestess (the traditional religious leader of the community). Sanctions include presentation of sheep and schnapps (which are used to pacify the river god), paying a fine and in some cases a strict warning. The chiefs with the council of elders give judgment in arbitration; resolve conflicts; and settle disputes as well.<sup>297</sup>

The Atewa forest, which serves as the source and headwaters of the Densu, has traditionally been regarded as the home of the ancestral spirits who provide protection, success and progress to the Akyem Abuakwa Stool and the people of the Akyem Abuakwa Traditional Area. There exist taboos prohibiting hunting of some animals regarded as totems of some clans as well as farming and harvesting of non-timber forest

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<sup>296</sup> FGD 10 (2009).

<sup>297</sup> FGDs 10, 11, 12, 13, 14, 15, 16, 17, 18 (2009).

products along the banks of streams and rivers in the Atewa forest reserve that are regarded as gods in the surrounding communities (Forestry Commission, 2007).

To regulate the use of water the chiefs and elders set rest days which are also known as taboo days. On the rest/taboo days, the communities are supposed to take rest from their farming activities and no one is supposed to go to the river. Rest/taboo days also determine when to have communal activities and meetings. For most communities in the upper and middle basins of the Densu (such as Nankese, Akwadum, Densuano and Adoagyiri), the taboo days are Thursdays<sup>298</sup> and Fridays for Akyem Asafo.<sup>299</sup> In the lower basin the taboo days are Fridays (Afuaman and Weiija)<sup>300</sup> and Sundays (Nsakina).<sup>301</sup> Regular meetings are announced by the beating of gong-gong; emergency meetings are summoned by beating of drums.

At the household level, decision-making is by household heads who are mainly men in consultation with few men in the family (except female-headed households where there are no husbands). The socio-cultural environment also has influence on women's participation in public activities. There are norms and practices that define the roles of women and men. Women, for cultural and social reasons are back-benchers in decision-making processes. They are not expected to speak at public meetings when men are present or are shy and hesitant to speak up or take active roles.<sup>302</sup> Lack of women's participation, according to Adoo-Adeku (2012), implies accepting the status-quo and allowing men to be in power. The people accept and follow the cultural norms of behaviour that lead them to have community's approval or avoid being ridiculed.<sup>303</sup> In some situations, women who go against these norms face humiliation. Others are given names such as 'Obaa kokonini' literally means 'a female cock'.<sup>304</sup> This implies a woman that is proud or disrespectful.

The chiefs and their council of elders are mostly men in the Akan traditional settings. The chief presides at decision-making meetings. In the absence of the chief one of the lesser chiefs, Ankobeahene presides. However, at Akyem Asafo, the queen mother was found to preside at such a meeting. Because the queen mother was presiding, women were among the elders.<sup>305</sup> What this meant to the trend of women's emancipation was not investigated. It would be interesting to investigate this in a future research. Where women are chiefs in their own right in certain parts of Northern Ghana, they hold power and authority (Kendie and Guri, 2010) but the cultural norms do not change.

### **8.3 Economic Settings and Participation**

The economic environment in the Densu Basin is such that the water resources of the basin contribute substantially to the economic livelihood of the people. Agriculture

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<sup>298</sup> FGDs 13, 17, 18, 19 (2009).

<sup>299</sup> FGD 10 (2009).

<sup>300</sup> FGDs 14, 16 (2009).

<sup>301</sup> FGD 15 (2009).

<sup>302</sup> Interview 56 (2009), FGD 13 (2009).

<sup>303</sup> Interviews 44, 45, 60, 65, 66 (2009), 97 (2010).

<sup>304</sup> Interviews 47, 48 (2009).

<sup>305</sup> FGD 10 (2009), personal observation (2009).

provides employment for 40 percent of the economically active population in the basin (WRC, 2011b). The economic activity in the basin involving water management besides irrigated farming is fishing. Fishing activities are practised in the basin especially in the southern section. This section focuses on two farmers' groups and two fishermen's groups to uncover how these economic activities influence participation in the management of water resources.

### 8.3.1 Irrigated Farming

Farming and irrigated vegetable production is the main source of household income and an important source of livelihood for the farmers. The farmers see water as the greatest physical constraint limiting their production.<sup>306</sup> There are a number of informal private irrigation schemes in the Densu Basin. Some of these schemes are located in the upper basin and near the Weiya Lake in the lower basin. Few of these schemes receive support from the Extension Services of the Ministry of Agriculture (MOFA). One such scheme is the Torga Kokpe Onion Block Farming in the Ga South District.

#### *Torga Kokpe Onion Block Farming*

Torga Kokpe is a community in the Ga South District in the lower basin. The farmers form a small group, which is made up of four men and two women. Each has his/her plot but the plots are on the same block. They raise funds to rent the land by levying each member. They receive onion seeds, two types of fertilisers and insecticide on credit from the Agricultural Extension Services of the Ga South District. The farmers pay back by cash after harvesting and selling the produce.<sup>307</sup> The Extension Services requires the farmers to cultivate only onions in block farming and be in groups so that they can be at one place to facilitate monitoring and evaluation of the credit system; dissemination of information; and transfer of new technology.<sup>308</sup> With this type of arrangement, the Agricultural Extension Services pre-determine the type of crop the farmers cultivate. The farmers have no power to decide on the type of crop to cultivate.<sup>309</sup>

The farmers come together and are involved in participatory processes because of their collective interests, which are access to water to irrigate their onion farms, and credit from the Extension Services. As the farmers are in a small group, they notice each farmer's action. The involvement of the farmers is explained by group action theory where the collective interest of a small number of individuals (or individuals with coercion) makes them act to further those interests (see Section 2.6 and Olson, 1971; Ostrom, 1990). The group has the purpose of achieving the common interest of its members.

The group members are empowered to take certain decisions. They appoint a group leader and an assistant based on their characters. They consider the leader to be a trusted person and an adviser. The group meets at the beginning of the project. From there on, they meet at the farm when they go to work. Any further discussions and decision-making are done

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<sup>306</sup> FGDs 9 (2009), 24 (2010).

<sup>307</sup> FGD 24 (2010).

<sup>308</sup> Interview 91 (2010).

<sup>309</sup> FGD 24 (2010).

on the farm. They make their own regulations. These include when to carry out certain farm activities such as weeding and spraying of farm with chemicals. They do these at the same period so as not to spread diseases. They stay on the farm in the morning until 11am and in the afternoon from 2pm to 5pm.

The source of irrigation water is a natural pond. The farmers use a pumping machine to pump water to their farms. The water is distributed by the use of sprinklers or water hoses with small nozzles. One of the group members owns a pumping machine and sprinklers, which he makes available to the group. In return, the group cultivates one plot, harvests, sells the produce, and gives him the money. He receives this in addition to what he gets from his plot. Another group member operates the pumping machine and in return the group cultivates for him, a plot (which is smaller than that given to the machine owner) until it reaches harvesting stage for him to harvest himself. This is adjacent to his plot. The owner maintains the pumping machine and sprinklers.<sup>310</sup>

Each of the members takes part in deciding how to have water to irrigate their farm (decision-making process) and each is involved in the action of bringing water onto the farm to irrigate it (implementation process). All the group members take part in deciding on the management of water – when to irrigate and when not to irrigate. The water level is low between February and June but from July to January, there is adequate water to irrigate. When there is adequate water, the plots are irrigated (at the same time in the day) twice a week with enough quantity of water. However, when the level in the pond is low the quantity of water used to irrigate at a time is reduced by half and irrigation is still undertaken twice a week. The plots are irrigated only in the evening so that it is supplemented by the night dew (and does not evaporate in the hot midday sun). All the group members are involved in the irrigation process. They move the sprinklers from plot to plot, as the sprinklers are not enough to cover the whole block at a time.<sup>311</sup>

All the group members contribute to land preparation. During land preparation, the group hires a tractor to plough the whole block of land. One or two of the group members who have money at the time of land preparation, pay for it. The other members pay back their share to the two after harvesting and selling their products. This type of arrangement requires a high level of trust among the group members. Trust has also been identified as one of the characteristics of resource users that are essential for collective action (Ostrom, 1998). The rest of the farming activities are undertaken individually. Each farmer puts in his/her own labour and in addition hires labour for making beds, planting, weeding and harvesting.<sup>312</sup>

The farmers depend on an informal cash credit system. They obtain cash credit from local moneylenders, who usually have high interest rates. At Torga Kokpe, the interest rate is 50 percent a month. The payback period is three months which is just enough for them to have time to cultivate, harvest and sell their produce. They end up paying an interest of 150 percent for the three months. Despite the high interest rate, the farmers are able to make a profit at the end of a season after selling their produce and paying their debts. They wish they could have access to a credit system with lower interest rate for them to

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<sup>310</sup> FGD 24 (2010).

<sup>311</sup> FGD 24 (2010).

<sup>312</sup> Interview 91 (2010), FGD 24 (2010).

increase their profit and have enough money to cater for their family properly.<sup>313</sup> Participation of the farmers is intensive because they take decisions in all cases concerning their farming activities except on the type of crop to cultivate. The farmers are motivated to participate by having access to water to irrigate their onion farms and credit (in the form of inputs) from the Extension Services. The trust among them enhanced their participation.<sup>314</sup>

#### *Faith Vegetable Farmers Association*

The Faith Vegetable Farmers Association is another group studied. It is based at Akwadum in the New Juaben Municipality in the upper basin. The membership size of the association is forty. The farmers have their individual farms yet they have come together as a group. The reasons for coming together include: acquiring a pumping machine to facilitate irrigation of their farms to improve their livelihood and raise their standard of living; finding good market outlets; and enhancing their ability to ask for assistance (as a group they are easy to be identified when it comes to assistance). They cultivate vegetables including okra, pepper, garden eggs, tomatoes and cabbage under irrigation during the dry season. The farms are rain-fed in the rainy season. Irrigation has made it possible for them to cultivate the vegetables all year round.<sup>315</sup>

The group collectively asked for and received a pumping machine from the National Youth Employment Programme (NYEP) of the Ministry of Manpower and Employment. They received a spraying machine from the New Juaben Municipal Assembly as a donation. The group receives education on how to use the agro chemicals and on best farming methods and practices and subsidised fertilizers and insecticides from the Agricultural Extension Services. The vegetable farmers have had bad experiences as well. An NGO whose name they cannot recall came to them with a project called Small Irrigation Project. After conducting a feasibility study, the NGO promised to assist the farmers with pumping machines and in establishing pipelines. The NGO asked the vegetable farmers to dig trenches for the pipelines. After this, the NGO left and promised to go back but never did.<sup>316</sup>

The source of irrigated water is the Densu River. The farmers pump water directly through movable pipes and water hoses to their farms. Farms which are closer to the source use between six and ten 18-foot pipes. Those far away from the source use as many as 30 of the 18-foot pipes. The group has only one pumping machine, which is shared amongst them. The greatest constraint limiting their production is the transmission of water from the source to the farm as one pumping machine and the few movable pipes are not adequate for the group. Individual farmers hire a machine operator to operate the pumping machine for them. The farmers practise furrow irrigation where water is made to run in between raised beds. They hire labour in addition to theirs in cultivating the vegetables.<sup>317</sup>

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<sup>313</sup> FGD 24 (2010).

<sup>314</sup> Interview 91 (2010), FGD 24 (2010).

<sup>315</sup> FGD 9 (2009).

<sup>316</sup> FGDs 9, 18 (2009).

<sup>317</sup> FGD 9 (2009).

The farmers sell their produce on the open market. Buyers from Koforidua, Suhum and other parts of the Densu Basin come to the farm to buy when demand for the crop is high. When demand is low, farmers send their produce and sell to wholesale buyers in the Koforidua and Suhum markets. Female farmers sell their produce themselves but the male farmers give them to their wives or sisters to sell for them. This is a common practice found in the Central Region of Ghana in the marketing of vegetables (Micah et al., 2000). For credit, individual farmers rely on local moneylenders and friends.<sup>318</sup>

The farmers select their leaders at a meeting by consensus. The leaders are the chairperson, secretary, treasurer and organiser. They meet usually on Thursdays (which is a rest day) to plan and discuss issues concerning their farming activities. The issues include how to make progress; new technologies; problems with farming techniques or a new crop disease, which is affecting a member's crops. In such a situation, the group invites the Agricultural Extension Officer to educate and advise them. They also meet to take account of their activities whether they have carried out actions as have been planned. The whole group contribute to the repairs and maintenance of the pumping and spraying machines through quarterly payment of dues. The farmers set their own rules. Some of the rules are no felling of trees along the bank of the Densu River; and weeding close to the Densu River within the buffer zone is not allowed.

In both cases, the farmers see farming as their main source of livelihood and the irrigated vegetable production as the main source of household income. The farmers see water as the greatest physical constraint limiting their production. Credit is an institutional constraint that they face.<sup>319</sup> The participation of farmers in the management of the water resources is greatly enhanced because of the fact that water availability impinges directly on their livelihoods and their economic and social wellbeing. Their common interest serves as a motivating force for their active engagement in decision-making as well as the implementation processes.

### 8.3.2 Fishing Activities

Fishing is a major economic activity and the main non-consumptive use of the Densu River. It is practised downstream in the Weija Lake. There are eight fishing communities around the Weija Lake. Most of the male inhabitants of these communities make a living by fishing and as such, fishing in the Weija Lake is very important to their livelihoods.<sup>320</sup> The study focused on Manhean-Amanfro and Weija fishing communities, which are the two largest fishing communities around the lake and where they have Densu Lake Fishermen Associations.

The Densu Lake Fishermen Associations' goal is to make fishing in the lake possible and sustainable. This is also the common interest of the members of the associations. Members of the associations join in a collective action by engaging in participatory activities in safeguarding this interest of fishing in the Weija Lake.<sup>321</sup> It is argued though, that interest alone is not adequate to set off collective action (Rowley and Moldoveanu,

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<sup>318</sup> FGD 9 (2009).

<sup>319</sup> FGDs 9 (2009), 24 (2010).

<sup>320</sup> Interviews 5, 38 (2009).

<sup>321</sup> FGDs 22, 23 (2010).



2003; Olson, 1971) nevertheless; interests are seen as precursors to stakeholder action (Rowley and Moldoveanu, 2003).

The Weija Lake is very big (33.6 km<sup>2</sup>)<sup>322</sup> and it is therefore not easy to define the social boundary around it though it has a physical boundary. As such, it is not clear as to who has access to the resource, to be precise who has the right to fish in the lake. This is in line with what some authors (Heikkila & Gerlak, 2005; Ostrom, 1990, 2001) are saying; that resources with defined social or physical boundaries help ensure that those individuals who participate in activities to manage the resource have the right to use the resource; and it is easier to define such boundaries around small resources (see also Section 2.6). With the Weija Lake, permission has to be taken from any of the chief fishermen of the various fishing communities around the lake by new comers (strangers and migrants) but some migrant fishermen, particularly from Winneba in the Central Region; do not comply with this rule. They find their way to the lake, spend days on the lake fishing using unaccepted fishing methods. These migrant fishermen create management problem for the 'indigenous' fishermen because their activities may tend to break down the collective action spirit of the 'indigenous' fishermen. The investments of these 'indigenous' fishermen in establishing rules to manage the resource are curtailed and the benefits from such investments are forfeited. This explains how free riding from non-group members can impede collective action.

#### *Organisation of the associations and roles of leaders*

The members of the Densu Lake Fishermen Associations are empowered to exercise their democratic rights in selecting their leaders by elections or consensus. This action is transformative because of its empowering and transparent nature. The leaders of the Manhean-Amanfro Densu Lake Fishermen Association are the chairperson, vice-chairperson, general secretary, financial secretary, treasurer, organiser and three chief fishermen who represent the three main ethnic groups in the community (Ga, Fanti and Ada). The Ga chief fisherman is the overall head called the 'Ogbaami'.<sup>323</sup> The executives of the Weija Densu Lake Fishermen Association are the chairperson, chief fisherman, secretary, treasurer and two organisers. Normally those who are active and prepared to volunteer their services are elected. Besides these, the background of the person is also considered. For the association at Weija the secretary is educated and is a teacher as well; the treasurer is a trusted person; the organisers are good at mobilising people; the chairperson is experienced and dedicated; and the chief fisherman is good at mobilising the fishermen and also respected among the fishermen.<sup>324</sup>

The associations manage their own affairs through their leaders. The leaders share responsibilities. The chief fisherman among other roles gives permission to new comers to fish in the lake and use the landing bay as well; he disciplines flouters of rules and regulations; settles disputes among fishermen; and is responsible for organising search and rescue missions. The chief fisherman supported by the other executives, calls for a general meeting once in every three to six months at Weija.<sup>325</sup> At Manhean-Amanfro the

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<sup>322</sup> Source: <http://www.gemstat.org/docs/Ghana081001StationProfile1.pdf> (accessed on 20-12-10).

<sup>323</sup> FGD 22 (2010).

<sup>324</sup> FGD 23 (2010).

<sup>325</sup> FGD 23 (2010).

chief fisherman calls for a general meeting as and when necessary.<sup>326</sup> The chairperson deals with difficult problems, which cannot be dealt with by the rest of the executives. The secretary writes minutes and letters, and keeps records. The treasurer deposits money at the bank; receives fines from defaulters and withdraws money from the bank. The chairperson, secretary and treasurer are the signatories to their bank account. The organisers mobilise the fishermen, distribute letters and run other errands. The organisers are also responsible for disseminating information. Since the fishing teams land at the bay at different times during the day, the organisers deliver general information to the fishing teams repetitively whenever a team lands.<sup>327</sup>

### *Regulation of activities*

There are three groups of fishermen within the Manhean-Amanfro association; they are grouped and named according to the method and style of fishing (including how they cast their net) used. The groups are Vuji, Kpo-nika and One-Man-Thousand. There were three other groups (Ako, Achiki and Atija) but they have been banned from fishing by the association because of their use of unacceptable fishing methods. The One-Man-Thousand catches only a particular type of fish locally called “one-man-thousand”. These are found at certain places in the lake. The group, One-Man-Thousand, is the only group assigned to fish at these spots. The other two groups, Vuji and Kpo-nika can fish anywhere except at the spots where the “one-man-thousand” fishes are found.<sup>328</sup>

The team on each canoe pays GH¢1.00 to the association fund whenever it lands at the bay. Proceeds from this fund are used for welfare purposes. For instance, in case of accident or disaster, the association hires a search party to search for the dead bodies; make a police report and make burial arrangements. At the end of each day, the association hires people to clean the bay and make an excavation to bury the waste from the fish. The association pays a toll for the landing bay from their proceeds to the Municipal Assembly. Some of the proceeds are used to remunerate the leaders (chief fishermen and their representative). The association use proceeds from fines to re-stock the lake with fish from the Volta Lake at Akosombo.

At Manhean-Amanfro all monies collected is given to the treasurer for safekeeping until the end of the fishing season that is around July when he presents an account at a general meeting and then deposits it at the bank. This kind of arrangement shows that the members have a lot of trust in the treasurer and it enhances participation. Before making any withdrawal from the bank, group leaders of the three fishing groups are consulted. The chief fisherman calls for a meeting and the purpose of the money explained to the leaders. The chief fisherman approves for minor expenses and the treasurer brings out money from the association’s coffers.<sup>329</sup>

The members of the associations are actively involved in the activities of the associations. They participate in the decision-making processes regarding the management of the lake. Their participation is therefore intensive. The members set their own rules or bye-laws for

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<sup>326</sup> FGD 22 (2010).

<sup>327</sup> FGDs 22, 23 (2010).

<sup>328</sup> FGD 22 (2010).

<sup>329</sup> FGD 22 (2010).

managing the water resources. They also prescribe sanctions to enforce the rules.<sup>330</sup> Some of the rules are set to guard against bad fishing practices to enhance the sustainability of the fisheries resource. Examples of rules are presented in Box 8.2 below.

**Box 8.2 Rules Set by Fishermen's Associations for managing the water resources**

- The spots where the fish lay their eggs are not to be fished. These are the edges of the lake where weeds are found.
- No fishing near the Weija dam;
- The following fishing methods are not allowed:
  - Atija, Ako and Achiki - keeping tree debris in the lake as bait to attract fish - at both Weija and Manhean-Amanfro;
  - Vuji - use of drag-fish net with mesh size less than 2½ inches - at Weija, though allowed by the Manhean- Amanfro Fishermen Association;
  - Kpo-nika\* - with this method the fishermen remove their clothes and get into the lake; form a semi-circle and drive the fish into a drag net with mesh size less than 2½ inches - at Weija. However, the Manhean- Amanfro Fishermen Association allows this.
- Fishing nets with mesh size smaller than 1½ inches are not allowed at Manhean-Amanfro as they catch both young (immature) fish as well as big ones. Catching the young ones reduces future size of catch, as the young ones that are to replace the big ones are not left in the lake to grow, and multiply. The mesh size of net that is not allowed differs at the two places; this is because the formal fisheries law, Fisheries Act 625, 2002 is not specific on the mesh size of net that is prohibited.
- Fishing is not allowed on Sundays.
- Fishing is banned by the Chief and the Wulomo (fetish priest) of Amanfro two weeks before the Ga Homowo festival.
- Fighting is not allowed.
- The associations also enforce the formal fisheries law, which prohibits the use of explosive, poison or other noxious substance for fishing (Section 88 Subsection 1 of the Fisheries Act 625, 2002).

\* Kpo-nika literally means 'remove your shorts'. It is a combination of a Ga word and an adopted English word (knickers).

*Sanctions*

The fishermen have realised that the trend of fish production is going down because of the use of fishing nets with small mesh size. Hence, they report anyone who goes against any of the rules to the chief fishermen. When a report is made the chief fisherman, the Ogbaami, calls for a general meeting by sending a gong-gong beater to invite the members of the association to assemble and sanctions the culprits. Different levels of sanctions are given depending on the seriousness of the offense. The Ogbaami gives warning to those that commit a light offense. The sanctions include paying fines and

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<sup>330</sup> FGDs 22, 23 (2010).

banning from fishing. Fighting leads to two weeks suspension. Those who use a fishing net with mesh size smaller than the recommended size are fined and have their net and canoe seized by the leaders. The net is burnt and the canoe is given back to the defaulter only after paying the fine and showing a new fishing net with the right mesh size.<sup>331</sup>

The fishermen depend on the lake for their livelihoods (fishing activities) and hence contribute to the conservation of the resource to sustain its functions and characteristics which is in line with GWP (2000) recommendation towards IWRM. The fishermen take decisions and act collectively to protect and advance their interests. Their participation is intensive because they have influence over the decisions they take.

#### *The Weija Lake Protection Association*

The Weija Lake Protection Association (WLPA) is a voluntary community-based organisation in the lower basin whose interest is to curb bad fishing practices. Members are mostly fishermen and fish traders from the eight communities around the lake. The WLPA collaborates with the traditional rulers of the communities surrounding the Weija Lake to protect the lake. The members of the WLPA and the traditional rulers meet, to deliberate and agree on appropriate local regulations as well as sanctions for protecting the Lake.<sup>332</sup> Photo 8.1 is a photograph of some members of WLPA at the one of the bays (dam site bay).



**Photo 8.1 Some Members of Weija Lake Protection Association (WLPA) with the Weija Lake at the background**

Source: Fieldwork (08-09-09).

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<sup>331</sup> FGDs 22, 23 (2010).

<sup>332</sup> The communities surrounding the Weija Lake are: Weija, Afuaman, Ashalaja, Domeabra, Manhean, Kwame Anum, Oduman and Dantsera. The area falls within the Ga traditional area.

The association (WLPA) exhibits good governance in that there is transparency and openness in formulating rules and regulations to protect the lake. The WLPA organises sensitisation seminars for the communities (see 6.4.4). The WLPA plans to be an umbrella over the various Densu Lake Fishermen Associations to educate them and coordinate their activities.<sup>333</sup>

The WLPA has a task force that guards against people who pollute the lake and engage in bad fishing practices such as using fishing nets with small mesh sizes; dynamite (explosive) and poisons for fishing in the lake. They also guard against people who do not observe closed season fishing that also relates to the traditional norms of no fishing during the Ga Homowo festival. The WLPA task force patrols on the lake and drives off migrant fishermen who come to fish during the closed fishing season.<sup>334</sup>

The migrant fishermen come from other fishing communities along the coast of Ghana; from Winneba, Apam and Anomabo (in the Central Region) and James Town, Chokor and as far as Ada (in the Greater Accra Region) to fish in the lake using fishing nets with small mesh size. It becomes difficult to exclude the migrant fishermen (free riders) from benefiting from the collective action of the 'indigenous' fishermen. This is a kind of collective action problem cited by Ostrom (2004). Conflicts develop between the migrant fishermen and the patrol team which lead to big fights. Sometimes these fights result in deaths of some of the members of the patrol team.

The task force lacks legal support. It is not well resourced to carry out its operations effectively, it does not have safety boats and life jackets to chase the migrants off and as such, they are the weaker ones in the fights with the migrant fishermen.<sup>335</sup> The WLPA allocates fishing time amongst the local fishermen, this works but the migrant fishermen infiltrate the system and break it down.

The association embarks on registration of boats in order to monitor activities on the lake; control the number of boats, which go on the lake to fish; and to have some money to organise activities to protect the lake. However, the registration faces problems as the boat owners are not prepared to register. Those who flout the regulations have their fishing equipment seized and are reported to and arrested by the police but most of the time they come back freed due to political interferences. Politicians interfere with the arrests because of the relationship of those politicians with some of the culprits. Culprits of off-season fishing are sent to the traditional rulers where they are fined.<sup>336</sup>

The regulatory activities of this association thrive on the fact that the regulations put in place by the Fisheries Commission have not been effective. The Fisheries Commission, in collaboration with the District Assemblies regulate fishing methods and environmental effect from fishing but the law enforcement is weak.<sup>337</sup> The formal institutions have the rules but weak enforcement capacities as against local community-based ones that derive their enforcement from the stake of the people or the traditional authorities.

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<sup>333</sup> Interviews 5, 38 (2009).

<sup>334</sup> Interview 38 (2009), FGDs 4, 16 (2009).

<sup>335</sup> Interview 38 (2009), FGD 4 (2009).

<sup>336</sup> Interview 38 (2009), FGD 4 (2009).

<sup>337</sup> Interview 38 (2009).

The local initiative in formulating and enforcing fishing regulations in protecting the lake seems to have gained grounds. The people develop their own rules, regulations and sanctions. They therefore legitimise their rules and regulations and see the water resource as their own. This is possible because they have committed leaders and strong leadership. The Densu Lake Fishermen Associations and the WLPA are primary stakeholders who take management of the resources into their hands and initiate participatory processes. The level of their participation is therefore intensive and the approach is transformative (see Table 8.1).

The degree of participation of the farmers is also intensive because they are involved actively in the affairs of the group such as setting rules and enforcing them. Management of water resources at the community level is by a combination of community norms, rules and enforcement as well as government regulation through the Fisheries Commission (the enforcement of which is a little weak). Table 8.1 shows the role and intensity of participation of the farmers' and fishermen's groups based on the ladder of stakeholder participation.

**Table 8.1 Role of Groups and Intensity of Participation in Economic Activities in the Densu Basin**

Economic activity	Process	Role of groups (farmers & fishermen)	Approach to participation	Intensity of participation
Vegetable farming	Decision-making	Appointment of leaders	Transformative	Intensive participation
		Setting of rules and regulations		Intensive participation
		Irrigation arrangement		Intensive participation
		Sharing of experiences		Intensive participation
		Sharing of problems		Intensive participation
		Seeking for assistance		Intensive participation
	Implementation	Renting of land	Instrumental	Tokenism
		Cultivation of 2 plots of onions for pumping machine owner and operator		Tokenism
		Bringing water to irrigate farm		Tokenism
		Land preparation		Tokenism
		Repairs and maintenance of pumping & spraying machines		Tokenism
Fishing	Decision-making	Selection of leaders	Transformative	Intensive participation
		Regulation of fishing		Intensive participation
		Setting of rules and regulations		Intensive participation
	Implementation	Re-stocking of the lake with fish	Instrumental	Tokenism
		Reporting of defaulters		Tokenism
		Sanctioning of defaulters		Less intensive participation

## 8.4 Inferences

This chapter studied the influence of socio-cultural (in terms of traditional governance system) and economic settings on participation in water resource management. The chapter has demonstrated that traditional norms and institutions control the traditional governance system in the rural settings. The system is decentralised and has a hierarchical order of office holdings and related responsibilities. The traditional norms empower the traditional authorities to have influence and take most of the decisions in the

communities. The traditional governance system is circumscribed by performance-based accountability.

The traditional authorities participate intensively by influencing decision-making at the community level. They take most of the decisions regarding local development; command mandatory communal labour for development and water resource protection; and set rules and practices to regulate the use of and protect water resources.

Members of the farmers' and fishermen's groups participate intensively in the decision-making processes regarding the management of water resources. The farmers and the fishermen have the power to take decisions concerning their economic activities and regulate the use of the water by setting rules and enforcement.

The chapter shows that having access to water to irrigate farms and credit facilities has the potential to motivate the people to participate in water management. The common interest to make fishing in the lake possible and sustainable and trust among the fishermen enhanced their participation as well. Since these are linked to their livelihoods, it is inferred that people are likely to participate in economic activities that have an impact on or are important to their livelihoods. The motivation to participate at the (a) individual level is explained by the social exchange theory; (b) at the group level is underpinned by the common interest for collective action theory; and (c) the community level is mandatory communal labour combined with unified spirit and the feeling of belongingness to participate.

The activities of the migrant fishermen present a challenge to the participatory processes in the use of the water resources in the Densu Basin. There is difficulty in embarking on registration of boats in order to control the number of boats and monitor activities on the lake.

The WLPA's plan to coordinate the activities of the different fishermen's associations constitutes an appropriate local initiative in managing local resources. This is demonstrated to possess the ability to deal with discrepancies in the bye-laws of the fishermen associations for example on the allowed type of fishing methods and fishing net mesh size. It has the potential to enforce and educate the communities on proper use of the water resources.

Several possible factors might influence stakeholder participation in natural resource management. It would be informative then, to explore the influence of other factors such as educational level and religious affiliations on stakeholder participation in the basin as future research.

## 9 Conclusions and Recommendations

### 9.1 Introduction

The thesis set out to examine what stakeholder participation entails as well as how its expected benefits particularly in the water sector are experienced in developing countries. It analysed how stakeholder participation has been interpreted in the policies and laws and applied in Ghana and the ensuing influence on water resources management. The implications of the findings including empirical evidence for the theory of stakeholder participation are explored. In addition, it assessed the intensity of stakeholder participation in the decision-making processes in the planning and implementation stages of water resources management activities in the Densu Basin in Ghana.

The preceding chapters have dealt critically with issues regarding stakeholder participation in water resources management in Ghana in general and in the Densu Basin in particular. In this chapter, I draw on the findings of the previous chapters to provide answers to the key research questions posed in the introductory chapter. The following sections are devoted to the discussions on conclusions drawn from the main findings of the thesis and their implications for theory. Recommendations follow in the final section.

### 9.2 Conclusions

The literature on participation offers several definitions of stakeholder participation, showing various aspects of the concept (see Table 2.3). Some definitions emphasise the provision of inputs into decision-making or policymaking processes whilst others concentrate on power relations with the concerns of shifting power into the hands of stakeholders. At a different level, stakeholder participation is highlighted as the provision of tangible inputs into implementation processes and sharing in resource use or benefits. The implication of the numerous focus of the variety of definitions is that stakeholder participation has a role in development policymaking and implementation. Stakeholder participation has not been limited to the adoption of technology and provision of labour, cash and essential services but has moved to decision-making in the development discourse.

The concept of stakeholder participation is associated with the concepts of decentralisation, democracy, good governance and environmental sustainability. The implication is that limitation or improvement in one of these concepts is likely to affect the others. The thesis integrated these related concepts of stakeholder participation in order to allow for broadening of the conceptualisation of the key issues underlying stakeholder participation. Decentralisation is seen as a governance reform for the reason that good governance involves a situation of power sharing between the centre and the subnational units of government in the decision-making process. In this sense decentralisation becomes a prerequisite for good governance due to the assumption that it has an effect on the distribution of power between different actors in the decision-making process (Béné and Neiland, 2006).

Stakeholder participation is thus supported by decentralised governance structures. The decentralised structures facilitate the democratisation process of inclusion, transparency, popular control and empowerment among others. The implication is that stakeholder



participation is effective in an environment where good governance is upheld. Democratic deficit in decision-making is addressed by stakeholder participation. Democracy in turn promotes intensive participation leading to improved governance hence democratic decentralisation becomes a requirement for effective participation. Thus, stakeholder participation theoretically has the potential of improving the quality of decision and policymaking. It also increases acceptance of decisions made and brings about easy implementation and empowerment of the marginalised. However, limited resources make it practically difficult to include all potential stakeholders in the participatory processes. Yet excluding certain stakeholders reduces the democratic goal of stakeholder participation. This dilemma raises the question of where to strike a balance in order to harness the benefits of stakeholder participation and still avoid the trap of ignoring relevant stakeholders in practice in situations of resource constraints.

#### 9.2.1 Conclusions - International Level

At the international front stakeholder participation is accepted as one of the key factors for sustainable water use and successful implementation of basin management plan and policies (Mouratiadou and Moran, 2007; Pahl-Wostl, 2007). Developing countries apply stakeholder participation in decentralised environs where the governance system of the country as a whole or a sector is decentralised. Empirical literature on cases from developing countries shows that there is emphasis on cost recovery (collecting payments from users to cover O&M costs) (Gleitsmann et al., 2007; Rautanen et al., 2006; Memon, 2004). However, recovering of O&M cost has been limited as it is not always successful (Jones, 2011).

The interpretation of stakeholder participation varies depending on the objective of the project or intervention within which it is applied. Experiences from the developing countries show that knowledge and skill development of stakeholders increase with active participation in activities that involve people with diverse backgrounds. Where stakeholders were informed and consulted in the early stages of projects, projects tend to be more successful. However, the extent to which the benefits of stakeholder participation in the water sector are realised is determined by socio-cultural, economic, and developmental factors.

Application problems of stakeholder participation in developing countries are associated with human and financial resources and neglect of local knowledge input. The limited economic and technological advancement of developing countries as well as limited resources in the form of human and finance makes the application of participatory processes difficult.

#### 9.2.2 Conclusions for Ghana - National Level

Stakeholder participation is interpreted in the decentralisation laws of Ghana as incorporation of the interests of the public in development planning through their representatives at the District Assemblies. However, implementation is met with unclear direction for the sub-district structures in the governance system. The situation is further complicated by the fact that there is a partisan government at the national level but local level government is non-partisan. The result is the superimposition of a partisan government system on a non-partisan local government structure producing more upward

than downward accountability. Thus, implementation problems with local participation are a constant experience in practice.

The situation becomes exacerbated by the fact that the sub-district structures in the local government system are non-functional. Because of this fact, the interests of local people are either not taken care of or are partially considered in the district plans and hence the national plans. The democratic content of development policy is therefore reduced. Consequently, as far as development planning is concerned, the decentralisation process in Ghana does not conform to the theoretical expectations in promoting participation at the local level. The release of power from the national to local level is limited. The non-functioning of the sub-district structures do not allow for public or constituent's active participation in the decision-making processes and hence rob them of the intended benefits of stakeholder participation. The political and economic environment is critical in harnessing the potential benefits of stakeholder participation.

Stakeholder participation in water resources management at the national level is influenced by Ghana's interpretation of the concept, which is demonstrated in various forms in practice. These include: (a) developing policy and legislation, and provision of guidelines for various water uses and services; (b) policy implementation and monitoring; and (c) cooperation and collaboration between government agencies in performing their functions.

The National Water Policy provides for participation of all stakeholders in water management at all levels. At the national level, the composition of the decision-making body, the WRC, which is responsible for the regulation and management of the country's water resources, is dominated by representatives of government agencies. Only three out of the 15 members are representatives of non-government agencies - one representative of women in general, one traditional authorities' representative and one representative of potable water producers. Since the inclusion of more stakeholders in the participatory processes involves additional cost, Ghana has been constrained in her quest to broaden the scope of participants.

The CWSA Act 564, 1998 mandates CWSA to encourage, through the DAs, the active involvement of communities in designing, planning, construction and community management of projects related to safe water development and related sanitation services. These were thought to enhance democracy, transparency and accountability. The same Act mandates the CWSA to encourage private sector participation in the provision of safe water supply and related sanitation services in rural communities and small towns.

Until 2006, urban water delivery was centralised. In response to international discourse and policy on water management, the Government of Ghana introduced private-public partnership (PPP) in the urban water delivery sector in 2006. Among the reasons given for PPP in urban water delivery was the search for effective and efficient water delivery service. It was also the government's approach to solving problems related to the limited financial resources, thus expecting that PPP would serve as an avenue for capital injection into urban water infrastructure development.

This change in management received some resistance from the public out of the fear that PPP will result in high prices on water pushing accessibility out of reach of the poor. Privatisation, which was inbuilt in the PPP, was seen as a way of treating water as a commodity. This is indicative of the fact that the urban water delivery sub-sector did not

accommodate the views of the public in its decision-making process. Though the PPP was supposed to complement stakeholder participation in the water reform, the public did not understand its purpose and intentions stemming from the inadequate consultation and education on the policy choices. In 2011, the management of urban water was reverted to central government control. This was because the targets set by government were not met. These targets included the reduction in the volume of unaccounted for water losses, uninterrupted water supply and increase in supply coverage. Consequently, though privatisation did not serve as a violation of stakeholder participation it limited access to water to all.

### 9.2.3 Conclusions for Basin Level

At the basin level, the River Basin Board, which is made up of mainly government agencies' representatives, is in control of water resources management. The Densu Basin Board brings together water sector agencies at the regional level to participate in decision-making processes in the management of water resources in the basin. Different participatory methods are employed depending on the purpose or objective of the activity, project or intervention. Planning workshops are held to develop long-term action plans to address water resources management problems or issues. The planning workshop involving government agencies were found to be effective in sharing information to assist in the identification of key water related needs of the basin. The active involvement of the agencies yielded an IWRM plan for the Densu Basin. This plan provided information in the development of a national IWRM plan.

The sub-committee meetings approach happened to be the most effective in increasing the scope of participation involving various technical people, which enhanced decision-making outcomes. These meetings brought people of different technical background outside the Basin Board to review past activities in specific areas, and to brainstorm for strategies for future management of water resources. The involvement of DAs in joint decision-making at Basin Board meetings succeeded in making the DAs committed to their role as managers of waste disposal. With regards to awareness creation in the DAs on their roles in protecting the water bodies, the training workshop approach was found to be the most effective in delivering lasting education, which results in participation of local governments.

Ecological monitoring tours turned out to be the preferred approach in promoting participation in efforts aimed at understanding the dynamics within the basin for socio-economic and environmental assessment of human activities. This facilitated the adoption of adaptive management approach to conserving biological diversity of the basin.

At the basin level, government agencies and NGOs engage in methods that empower them to participate actively in decision-making processes. The degree of their participation is intensive as far as the protection of water resources is concerned. NGOs are able to penetrate into the communities and engage local people in water resource protection activities in the implementation stages. The participation of the local people is meant to achieve objectives set by the NGOs.

Four distinct ways of initiating stakeholder participation as mentioned earlier, are observed at the basin level. Stakeholders are induced to participate by incentives; persuaded to get involved; obliged to participate by traditional authorities and communal

norms; or through stakeholders' own initiatives. Apart from the first one, the other three approaches have the potential of sustaining stakeholder participation. This is because incentives are limited and constrained by available resources. Through persuasions, stakeholders may receive education that may increase their understanding of issues and the likelihood of enhancing their legitimacy and hence sustaining their interest in participation.

Programmes for stakeholder participation are information and communication dependent. Information dissemination as such constitutes an important and critical factor for effective stakeholder participation at the community level. The participatory methods used to engage the communities in the basin varied. Drama that relied on the use of culture, slide shows and radio call-in programmes on local FM stations communicated well with the people. The use of posters and leaflets was less effective as most of the people cannot read.

#### 9.2.4 Conclusions for Local Level

Ghana's decentralisation policy affected the rural water delivery sector. The rural water delivery programme is implemented at the district and community levels by the District Assemblies through the DWSTs and at the communities by local water agencies (WATSAN committees and WSDBs). The local water agencies manage the water system on behalf of the communities. The maintenance and operation is sustained by making sure that the system recovers O&M cost through the active involvement of the local water agencies.

The findings of the research reveal that communities participate intensively in activities they identify themselves with. This explains why the communities are involved in the decision-making and implementation processes of the rural water delivery scheme. The arrangements give them the power to select those whom they can entrust the management of the water delivery system and the most appropriate type of facility in terms of cost and maintenance. They have developed a sense of ownership of the water facilities and hence are responsible for the operation and maintenance of these facilities. These strategies have strengthened access to drinking water in the rural areas.

Besides the rural water delivery sub-sector where stakeholder participation is formally institutionalised at the local level, there is no established formal platform for the local populations to channel their problems and needs and assume their environmental responsibilities. Neither is there a formal avenue for community members to acquire the knowledge and skills required to make decisions and launch initiatives. The Unit Committees which form part of the local government structure and which could have been avenues or offer political spaces for local level participation in decision-making in general are not functioning. Rather the local people form community-based organisations that provide them space for participation in activities regarding water resource protection.

The local people form groups that are based on their collective interest in economic activities, which are related to their livelihoods. They engage in collective actions to manage the water resources on which their economic activities and hence their livelihoods depend. This demonstrates that people are likely to participate in economic activities that have direct impact on their livelihoods. Common interest engenders collective action as well as participation. Thus, participation is enhanced when the

management of the resource reflects collective interest. The common interest of the fishermen in improving fishing in the Weija Lake and making it sustainable enhances their participation in managing the water resource. Similarly, the common interest of the farmers in having access to water to irrigate their farms and access to credit facilities enhances their participation. The conclusion from this development is that if communities participate at the beginning of projects that target issues that have a bearing on livelihoods participation is enhanced.

With regard to fishing in the Weija Lake, the formal institutions have the rules but enforcement capacities remain weak as against local community based ones that derive their enforcement from the stake of the people or the traditional authorities. The traditional norms in the Densu Basin rural settings empower the traditional authorities to have influence and take most of the decisions in the communities. They set rules that regulate the use and protection of water resources based on indigenous ideas and knowledge. The allegiance to and reverence for the chief, the unity of the community and collective identity under the traditional governance system in the rural areas give the chiefs customary legitimacy (see also Anokye and Gupta, forthcoming). The chiefs are able to use this to facilitate participation of the people in communal activities. This has the potential of bringing about sustainable development in water management at the local level. Some writers, nonetheless caution against the use of local knowledge (Briggs and Sharp, 2004; Forsyth, 2003) until the scientific bases of the local knowledge are examined. They argue that there is the need to assess the quality of ideas and methods represented as indigenous knowledge before using it. The rules of the communities in the Densu Basin about the use and protection of water resources seem to have scientific bases. For instance, weeding close to the riverbank is not allowed. To the communities it means exposing the nakedness of the river goddess. This shows disrespect of the community to the river goddess. To avoid the shame of being naked, the river goddess abandons the community. Scientifically, weeding close to the riverbank leaves the river bare and exposes it to the direct hot sun. Eventually the river dries up (i.e. abandons the community).

Local level challenges tend to have similarities with those at basin level. The challenges outlined earlier include personnel competences and technological capabilities. Others evolve from inability to motivate members of the WATSAN committees who work on a voluntary basis. The WATSAN committees in certain situations are unable to mobilise enough funds for O&M of water facilities. Some communities are not able to raise money for the contributory five percent capital cost. Consequently, such communities are deprived of the facility for potable water. In such situations, the DAs are confronted with the difficulty of distinguishing between really poor communities and communities that cannot mobilise themselves to raise the money. To prevent the exclusion of poor communities from the provision of potable water the DAs assist such communities in the payment of the minimum contributions required to qualify for consideration. The DAs however, have tight budgets. In such circumstances, some communities receive assistance from NGOs. The fact still remains that financial constraint is a factor limiting community access to water.

### 9.2.5 The Practice of Stakeholder Participation in Ghana

Ghana practices different forms of stakeholder participation at the various levels of governance. The practice in water resource management is presented in Table 9.1, which recalls Table 2.3 (aspects of stakeholder participation from the literature) and includes the situation at the different governance levels in Ghana. The nature of stakeholder participation results in different levels of participation - intensive or tokenism, depending on the role played by the stakeholders in decision-making and implementation processes. This differs from activity to activity and stakeholder to stakeholder.

**Table 9.1 Nature of Stakeholder Participation in Ghana in Water Resource Management**

Forms of stakeholder participation	Nature of stakeholder participation in Ghana			Intensity of participation
	National level	Densu Basin level	Local/community level	
Provision of inputs into decision-making processes	Collate ideas from government agencies - WRC, GWCL, EPA, WRIS, GIDA. Research findings of universities, research institutes, consultants as inputs	Inputs into decision making are collated from decentralised departments, DAs	Communities present views, preferences regarding water delivery facilities at community meetings	Intensive - degree of involvement is high
Power in the hands of stakeholders	Power in the hands of WRC, GWCL, EPA, GWCL, PURC. Policy issues initiated; legal regimes defined	Power devolved to basin boards, DAs & NGOs regarding water resource protection	Power in the hands of chiefs & elders; WSDB & WATSAN on choice of technology, location & tariff, in employing O&M staff of water facilities	Intensive – stakeholders in control or empowered
Involvement in decision/policymaking processes	WRC, GWCL, CWSA, FC, EPA, GIDA meet to discuss & deliberate on water management issues. World Bank/IMF, foreign consultants, external donors involved in water supply policy dialogue	Basin boards engage decentralised departments, RCC, and NGOs in deliberations	Communities involved in data collection for IWRM planning. Chiefs & elders involved in setting rules. Farmers, fishermen take decisions regarding irrigation and fishing respectively	Intensive – Stakeholders influence decisions/policies
Provision of tangible inputs into implementation processes	External donors provide technical, financial & logistical support. Central government contributes to funding	Farmers and volunteers provide labour in planting trees, clearing water weeds	Communities contribute labour, materials & cash to maintain water facilities. Private sector provision of services	Tokenism – project objectives achieved
Benefit or resource sharing	Lessons sharing in rural water delivery system by donors & CWSA	Residents share clean environment after removal of refuse dump	Sanitation & toilet facilities. Credit facilities, technology on onion farming from AES. Pumping machine for irrigation	Tokenism – no influence on policies/decisions
Receipt of information	Public receives WRC publication in the newspapers, flyers, presentations on radio on water issues	Schools, public, DAs through awareness creation	Communities receive information on water issues through WRC & NGOs - open forums, FM stations	Tokenism – information flow is one-way (top-down)

#### 9.2.6 Factors Influencing Stakeholder Participation in Water Resource Management Activities in Ghana

Many factors are identified to influence the participation of stakeholders in water management in Ghana. First, stakeholder participation cannot be analysed independently of the way decentralisation is interpreted. How much a governance system is decentralised affects the way stakeholder participation is applied in Ghana. Development decision-making powers, functions, and responsibilities are transferred from the central government to the districts. Hence, the level of development of the local governance structures influences the extent of participation in decision-making processes.

The modern governance system does not penetrate to the local/community levels, as there are limited formal local structures some of which are not functional. In addition, there is limited interplay between the modern governance (formal administrative) systems and the traditional governance systems. These limit participation in development planning as well as water resource management at the local level. Stakeholder participation entails bottom-up approaches but the bottom is weak with respect to the formalised structures (Unit Committees). Inputs from the local people are not forthcoming therefore; development planning may not cover the needs of the local people.

Water resources management functions are decentralised to the river basin level. Therefore, formal structures of stakeholder participation are limited to the river basin level where government agencies and District Assemblies participate in decision-making and implementation processes. Decentralisation in the rural water delivery sub-sector is down to the community level. The process emphasises community ownership and management, which entails community participation in the planning, implementation and management of water facilities at the local level. The principle adopted promotes the active participation in the administration and development of domestic water delivery. There is intensive participation of communities and their local water agencies in both decision-making and implementation processes of the water delivery system.

Second, stakeholder participation is influenced by common interest. The perceived effect of an intervention on the livelihoods of the people influences their participation. For example, common interests of farmers having access to water to irrigate their farms serve as a sustained source of motivation to participate in water management activities. The intensity of participation is dictated by the level at which the livelihoods of the people depends on the resource being managed.

Third, economic factors including financial resources limit the scope of participation. Participatory processes require funds for organising stakeholders. The frequency of contact with stakeholders and the coverage of the necessary stakeholders are dictated by the level of funds available. Inadequate funds place a limit on the involvement of primary stakeholders at the basin level. The WRC, which is mandated to carry out the coordination of stakeholder activities, tend to rely heavily on donor support. The extent of participation is therefore curtailed by what the donors are prepared to give out.

Fourth, resource constraint in the form of poor human capacity of staff at the district level reduces effectiveness of participation. The District Assemblies do not have human capacities to perform planning and monitoring functions in water management.

Fifth, low literacy rates pose problems in participation, as it is difficult for those with low levels of formal education to adequately understand issues and handle them analytically. Culturally, women play important role in water management and as such the water policy requires the encouragement of women's involvement in planning and management of safe water supply. However, the high illiteracy rate of women reduces women's participation on the WATSAN committees. The few women on the committees are mostly pump attendants.

Sixth, the mode of information dissemination by the WRC and the Densu secretariat, which employed leaflets distribution, is found not to be appropriate with the illiterate population and affects communities' participation in conservation of water resources and watershed management practices.

#### 9.2.7 Benefits and Problems of Stakeholder Participation in Ghana

There are benefits emanating from the application of stakeholder participation in Ghana (see Table 9.2, which recalls potential benefits of stakeholder participation in general and from developing countries from Table 3.2). First, the acceptance of stakeholder participation by the policy and scientific world gives Ghana the chance of receiving financial and technical assistance for projects with stakeholder participation from international aid organisations and multilateral sources that are promoting stakeholder participation in development.

Second, the inclusive nature of participation brings together ideas from different stakeholders in the water field (agriculture, forestry, water supply and local government) to develop plans that serve the interest of many. The national water policy and IWRM plan for the basin benefit from inputs from actors from different water use sectors. The actors in turn gain insights as they deliberate on issues.

Third, the contribution to capital cost in domestic water supply is believed to enhance the sense of ownership by beneficiaries. This implies sharing of risk between government and beneficiaries and thus can make funds available for other developmental projects. However, inability of beneficiary communities to pay this capital cost alienates them from the utilisation of the resources.

Despite these benefits, there are some problems of the practice of stakeholder participation in water management in Ghana (see Table 9.2). The problems from Ghana include under representation of some groups, limited inclusiveness, high resource use, costly processes, time consuming and the need for literate population.

Bringing all the different stakeholders together to have their views and preferences is expensive. It makes participation complex because individual stakeholders come with different interests and hence generates the setting of many targets, which may prevent prioritisation for effective resource use. In addition, the amount of time required for organising and coordinating participatory activities becomes enormous. It takes time to train or build capacities of stakeholders (DAs, DWSTs, Basin Board members, WATSAN committees and WSDB members) for them to understand and make meaningful contributions to issues.



**Table 9.2 Benefits and Problems of Stakeholder Participation in Ghana**

Benefits from theory	Experiences in Ghana	Problems from theory	Experiences in Ghana
Well-informed and more innovative decisions Incorporation of local knowledge in plans & policies	National water policy & IWRM plan for basin benefited from inputs from actors from different water use sectors.	Over/under representation presentation of some groups. Inadequate and inappropriate representation: domination of some groups	Yes, under representation of the public & private sector on WRC & river basin boards
Public gains new information and perspectives	WRC & Basin Board members gain insights as they deliberate on issues	Difficulties in ensuring inclusiveness of all interests in decision-making process. Inability to meet many and diverse interests	Yes, powerful stakeholders not inclined to share power. Limited by resource constraints
Easy implementation of decisions	DAs implemented decision to re-locate waste dumps	Promotion of payment for water excludes the poor from getting access	Poor communities deprived of potable water because they cannot provide the 5% capital cost
Outcomes meet needs of stakeholders. Improved quality, accessibility & reliability of drinking water to stakeholders	Yes, in the case of rural water delivery	Expensive: bringing diverse stakeholders together is both time consuming and costly	Yes, has to rely on external donor funds
Project objectives achieved	Yes, IWRM plans prepared for basin. Access to quality water improved & water facilities well managed and protected	Time consuming and use of too many resources in organising and coordinating stakeholder activities	Same in Ghana. It takes a lot of time for stakeholders to understand the issues for action.
Opportunity for capacity building & knowledge acquisition	Capacity of WATSANs & WSDB members built through training and practice	Literate population required to facilitate planning and implementation	Literate persons required among local water agency members.
Accountability	Local water agencies accountable to communities		

Limited power sharing by government agencies and NGOs results in tokenism participation in water resource protection by communities. There is the problem of under-representation of some groups in participatory processes. Private and public stakeholders are under represented on the WRC and Densu Boards. Associated with this problem is the difficulty in ensuring inclusiveness of all interests. Stakeholder participation is resource dependent in the water delivery sub-sector and water resource management. Financial and human resources are constrained at all levels. Ghana has been receiving support from foreign donors who at times influence policies.

A literate population is needed to facilitate planning and implementation as they can understand issues and handle them analytically. The positions of the treasurer and secretary of the local water agencies managing rural water supply require literate persons and this at times is difficult to fulfil.

### **9.3 Implications for Theory**

Existing literature on participation is dotted with elements of stakeholder participation. These elements are concepts related to stakeholder participation. The study found out that existing literature on gradation of stakeholder participation deals with different intensities of stakeholder participation with no links with the elements of stakeholder participation such as goals, principles, approaches and outcomes of participation. This study adds to the participation theory by providing a complex ladder of participation. The complex ladder is an extension of the ladder of participation that integrates the different levels of stakeholder participation with the elements of stakeholder participation (see Figure 2.3). The complex ladder provides a framework, which can serve as a useful measure of participation and its links with the other elements of participation. The complex ladder shows that the transformative approach to participation is likely to lead to intensive participation. The intensive participation is likely to have goals of good governance, democracy and sustainable development and requires accountability, transparency, legitimacy, inclusiveness, equity, efficiency and effectiveness.

However, application difficulties of stakeholder participation in developing countries are associated with human and financial resources. Participatory processes are resource intensive because of the large numbers of participants and the need for capacity building in some cases. Such developments constrain the application of the definitions of stakeholder participation as provided by Glicken (2000) which seeks to invite as many stakeholders as possible. The ability of developing countries to apply stakeholder participation in this sense is greatly influenced by available resources.

Often participation discourse treats all stakeholders as equal resulting in a neglect of the differences between people in terms of power as well as real social and economic needs. Wester et al. (2003) note that such an attitude restrains reasoning that gives consideration to the redistribution of resources, entitlements, and opportunities among stakeholders. In developing countries where these differences are pronounced, the chances of reaping the supposed benefits of participation are greatly reduced. Limited resources are found to make it practically difficult to include all potential stakeholders in the participatory processes and yet excluding certain stakeholders reduces the democratic goal of stakeholder participation.

How decentralisation is interpreted is critical in determining the intensity of participation of local people in management of resources. Decentralisation may not bring about participation of local people in water resource management and development planning. How much a governance system is decentralised is contingent on the presence and functioning of implementation structures. Functional local structures (District Assemblies, Area Councils, Unit Committees, CBOs and traditional groups) are prerequisites for effective participation in resource management. The implication is that stakeholder participation is facilitated where the decentralised structures are functional and these present sufficient avenues for dialogue and for the voice of the marginalised to be heard.

Notwithstanding, there is the need also to reinforce national and regional level structures. Mohan (2008: 49) cautions that an over-emphasis on local civil societies in participation may “leave important structures untouched and also do nothing to strengthen [nation] states and make the states more [effective and] accountable to their citizens”. There is

also a pointer to the fact that not all international discourses and policy prescriptions on water management (e.g. PPP) may be appropriate for all countries. Depending on the state of technology and economic development, developing countries may not be ready to pay economic prices for water. The stage of development attained in a country is therefore a crucial factor to be considered before adopting these internationally accepted strategies.

## **9.4 Recommendations**

### **9.4.1 Recommendations for Ghana**

The implications of the research for improving stakeholder participation in water management in Ghana are discussed in this subsection. The conclusion emanating from this study suggests that the adoption of participatory approaches that are more empowering are to be considered to improve participatory processes. Providing spaces for communities to take part in decision-making and not only providing tangible inputs like labour. For effective water management, participatory approaches must take into consideration the available human and financial resources. Capacity building, skill development and training are recommended for dealing with the problem of limited human resources. Effective stakeholder participation requires capacity to react to information in decision-making (Özerol and Newig, 2008; Blackstock et al., 2007). Unless human capacity is built in the area of water engineering and planning at the districts, planning of water management activities and monitoring of water contractors will continue to be a problem at the District Assemblies and over burden the CWSA. Since literacy levels are low in the rural Densu Basin and pose problems in the management of water resources, capacity building should be intensified for stakeholders especially women for them to take active part in managing water resources.

For the non-literate population, information dissemination strategies should utilise visual displays that communicate well with them such as diagrams, slide shows, pictures, videos and dramas in the local language. These strategies can be used to disseminate information that will empower communities about their rights and privileges as well as responsibilities in water management. At the national level, the information dissemination may have to depend on hand bills, brochures and leaflets because of the category of stakeholders at that level of society. These are able to read and comprehend easily what is portrayed in letters and symbols better than the non-literate population.

Nationally, the WRC should educate commercial and industrial users on regulations concerning water use and water resources abstraction. This would increase the payment of water permits and improve the water management fund, which is the major internally generated fund for water management in Ghana. This in turn would reduce the dependency on external donor funds.

The cost of implementation of participatory approaches is a major limiting factor. Cost issues influence any intervention requiring stakeholder participation. In this regard, representative participation, instead of involving individual stakeholders, may be the most appropriate. This approach will make it easy to work with fewer members and reduce costs as it employs limited resources. From a different perspective, the cost of participation can also be reduced through prioritisation of activities.

The WRC and the Densu Boards can be more representative if the representations of private agencies and civil societies including women are increased to balance decisions taken and improve the inclusive nature of participation. Localising participation, i.e. dealing with project-by-project and representative participation is likely to reduce the number of stakeholders but not the number of relevant stakeholder groups; ensure inclusiveness; avoid under representation; limit the problem of loss of focus; and reduce time required in organising and coordinating participatory activities.

The traditional authority provides unifying influence, leadership and has legitimacy for mobilising the community and engaging them in water resources management activities. Since local community-based rules derive their enforcement from the stake of the people or the traditional authorities, public policy on water resources management can incorporate the traditional governance system with its norms and values. This is likely to lead to effective participatory governance that will bring about sustainable development in water management at the local level.

Since formal structures at local level are limited and in turn limit participation of local people in development, environmental CBOs that offer space for local participation are to be strengthened through training and skill development to create more space for communities to vent their problems and needs, and assume their environmental responsibilities. This hopefully will increase participation of locals in decision-making processes and improve democracy and good governance. The needs of the locals can be considered in the district plans for the locals to enjoy the intended benefits of stakeholder participation.

Participation is enhanced when the management of the resource reflects the collective interest of the people. Therefore, participatory management efforts should be preceded by the identification of the collective needs of the people for them to participate actively. Where management activities target issues that deal directly with the livelihoods of people, the participation of the people is enhanced compared to activities targeting issues that do not deal directly with livelihoods. The river basin secretariats and NGOs should concentrate on linking management activities with livelihood activities to engender active involvement of various interest groups within the basin. This approach has the potential of empowering the people economically. It may also stimulate community interest, initiative and collective action in the protection of the water resources. Consequently including economic activities deemed to be the pressing need of the society is likely to have high levels of participation of people.

On a different plane, communities participate intensively in activities they identify themselves with and projects where they have ownership (like the rural water supply scheme). Therefore, programmes aiming for intensive community participation should have activities and projects that seek to enhance the sense of ownership of communities.

Application of participation to mean contribution to capital cost of the rural water delivery system will continue to exclude the poor from accessing potable water unless the poor are assisted through subsidy. The exclusion of the poor is against the human right to water and sanitation principle which Ghana is committed to.

#### 9.4.2 Recommendations for Developing Countries

It is not easy to generalise the experiences in the Densu Basin, Ghana to other river basins and other developing countries. However, there are experiences, which may be relevant to developing countries with similar economic and technological contexts like Ghana. With regard to the limited resources in developing countries, representative participation is recommended as the all-encompassing stakeholder principle gives rise to a large number of potential stakeholders, which makes participatory process costly as well as difficult to coordinate.

Traditional practices of water management with its associated governance systems should be considered together in developing countries. The scientific basis of these traditional practices should be investigated to enhance water resources protection and conservation. Greater attention must be given to management activities that have direct links with livelihoods of the people as such activities are known to engender active participation of the interest groups.

Capital cost contribution of water facilities by beneficiaries excludes accessibility of the poor to safe drinking water unless they receive support from outside (government, NGOs or external donors). Therefore, localising participation by considering involvement on project-by-project basis and representative participation may be a better option for developing countries. These may reduce the difficulty associated with limited resources.

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## Appendix I: Interview Schedules and Guides

### **A. Interview schedule for WRC and Densu Basin Board and secretariat**

State of water resources management in Ghana: The mandate of WRC and functions. Relationship between the WRC and other water related MDAs. How does the WRC implement its decisions?

What does stakeholder participation and decentralisation mean to you?

Water policy: what issues informed the adoption of the water policy? Which stakeholders are involved in the formulation process and what roles did they play?

State of water resources management in the Densu Basin: collaborating agencies - interactions of the Densu Basin office with other government agencies, NGOs, the public and private sector at all levels.

IWRM planning for the Densu Basin: stakeholders involved and role played.

Development intervention programmes/projects organised for stakeholders (communities in particular) in the Densu Basin with regard to water resources management - identification and design, objective.

Categories of stakeholders involved (community members, local group leaders, chiefs, elders, the youth, women, men, (school) children, CBOs, water users).

How are they involved? - Decision-making and/or implementation, the approach (instrumental or empowerment).

Water related activities of NGOs in the Densu Basin. Awareness creation methods and their effects.

State of water resources in the Densu Basin: quality and quantity; demand and supply.

Challenges facing sustainability of the Densu Basin water resources: sources of water pollution and effect; conflicts in protecting the Weija Lake; conflicts in forest reserve protection

### **B. Observation guide**

*General:* Sources of drinking water; water supply facilities; rivers, lake and streams; water reservoirs. Sources of water pollution – solid and liquid waste collection point.

*Specific:* Basin Board and sub-committee meetings - categories of participants (stakeholders), chairperson, issues discussed and how decisions are arrived.

Open forum – venue, day of the week, time, categories of participants and language used. School quiz.

Ecological monitoring tour - project/activity being monitored, categories of participants.

### **C. Interview guide for government agencies and DAs**

Core activities and mandates. Core activities and mandate of your agency in relation to water management? /what water management activities does your organisation engage in?

Collaborating agencies in the water sector: what is the relationship with other water related agencies? Cooperation in any project. How?

Relationship with the WRC/Densu Basin secretariat: representation on Densu Basin Board, directives received; directives implemented; not implemented; reasons.

Involvement in water policy formulation and IWRM planning in the Densu Basin: at what stage; how (consultative meeting, workshop, any other form). Which categories of stakeholders were involved? Involvement in capacity building or training workshop organised by WRC in connection with water resources management. What was the impact?

Challenges facing sustainability of the Densu Basin water resources: sources of pollution and effects; conflicts in forest reserve protection.

The water supply situation in the country/basin: reliability; challenges with water supply.

Challenges facing your outfit in participating in water management activities.

#### *Specific for DAs*

Waste management: the DA's waste management process.

Collection of waste; waste dumping sites; waste treatment if any.

Decentralised development planning: Why the need for decentralised development planning? The decentralised development planning process. How is your outfit involved in the planning process? Who are those involved in the development planning processes? Constraints in the development planning process including constraints at the sub-district levels.

What is the ability of the DA able to carry out its own projects?

What is the DA's budgeting procedure of the DA?

Relationship of the DA and the decentralised departments

Perceptions on the selection of DCEs, appointees and election of District Assembly members.

#### **D. Interview guide for NGOs**

Core activities in the Densu Basin. How is your organisation involved in water management and reasons for engaging in such activities (awareness creation/education, environmental protection, drinking water supply and training)? For how long have you been involved in these activities?

What is the nature of the relationship between the NGO the communities. What is the nature of the involvement of the communities in the activities of the NGOs, how are they involved? Categories of stakeholders involved (community members, local group leaders, chiefs, elders, the youth, women, men, (school) children, CBOs, water users); participatory methods used; effect of the methods on the process; constraints in engaging the communities; name of communities. Level of commitment of the people; level of empowerment if any.

Support: Nature of support and source of support.

Relationship with government agencies and the WRC/Densu Basin secretariat.

Existing indigenous practices and systems of communities for managing water resources.

State of water resources in the Densu Basin: quality and quantity; sources of pollution of water bodies; effect or problems posed by the pollution.

#### **E. Interview guide for CWSAs and DWSTs**

Water supply situation in Ghana and in the Densu Basin. Sources of drinking water.

Mandate and core activities. In what ways are you involved in rural water supply?

Policies governing water delivery: involvement of the CWSA in the policy formulation. Why focus on community involvement in the water supply scheme?

Support: Nature of support (financial assistance, technical assistance and training).

Collaborating agencies including NGOs in the rural water delivery scheme? Nature of relationship amongst water delivery agencies.

Actors in the water sector: Roles in planning, construction, O&M and monitoring of water supply facilities/system.

DAs contribution to water projects.

Processes and procedures of implementation of the rural water scheme. Community participation. Training on water issues. Accountability structures/systems of WATAN committees and WSDBs.

How would you evaluate the system? Give reasons.

Constraints in the water delivery system.

#### **F. Interview and FGD guides for communities**

##### *General*

Protection of water resources: Modern and indigenous (bye-laws, beliefs, norms, taboos) ways rules and regulations governing water bodies and use of water resources.

Who sets the rules? Sanctions: what happens to defaulters?

Actors in the water sector and their roles. The quality and quantity of raw water now and five years ago. Major sources of pollution of water bodies and effect on livelihood and the resource.

Sources of drinking water in the community; who are in charge (traditional leaders, WATSANs/WSDBs, NGOs, DAs, Unit committees)? What are their roles? Selection of WATSAN/WSDB. Reliability of the water facilities: quality and quantity of water.

##### *WATSAN committees and WSDBs*

Composition and roles of WATSAN/WSDB. What gender issues are considered?

Training: Training received? Content of training? Impact of training received.

Processes and procedures for acquiring water facilities. How do your concerns get to the DA?

Actors in the water sector and their roles in planning, construction, O&M and monitoring of water supply facilities/system

Actors involved in decision-making regarding capital cost and tariff (contribution, mode of payment), selection and siting of water facilities. How are decisions arrived at?

Accountability: How do you render accounts to the community; and the DWST?

Relationship with traditional authorities.

Mobilisation of communities for payment of capital cost contribution and recovering of O&M costs.

#### *Traditional authorities*

Traditional governance system: hierarchy; the different positions and responsibilities; selection of traditional leaders.

Accountability: how do you render accounts to the community and when? (At village meetings, durbars, any other occasion).

Water management activities/projects: type of activities/projects; initiators/organisers, Communal work – who initiates, who takes part, mobilisation, supervision.

Conflicts over water resources: existing and potential.

Compliance level of community.

How are traditional authorities involved in decision-making processes at the community level and district level?

Consultation on development and water issues by NGOs, DAs, WRC/Densu Basin secretariat or any government agency and CBOs.

#### *Community-based environmental organisations/associations*

Aims and objectives of the organisation. Core activities, why do you undertake these activities?

Motivation: What motivated you to join this organisation?

Support: source of support; nature of support (financial, materials and training)

Leadership: How do you select your leaders? Any training acquired? Impact of the training.

How do you set the rules of the organisation?

How are District Assembly projects in your area made known to you? How did you make contributions to the project?

Involvement in activities of NGOs.

#### *Households*

Bio-data: sex, marital status, level of education, occupation of household head or representative.

Participation in water resource management activities/project: type of activities/project - meetings, symposium/talk, tree planting, communal work, community meetings. How were you involved in the activities organised by WRC/Densu Basin office, NGOs, DAs, Unit committees, environmental CBOs, FBOs, traditional leaders, WATSANs/WSDBs? What were your motivation and expectations? Contributions made - tangible and intangible; individual or collective; voluntary or coerced. Benefits gained - tangible and intangible.

Medium for publicising activities/project.

Water usage: major uses of water. How are you involved in the provision of the water supply facilities in the community and/or in the O&M of the facilities? How are WATSAN/WSDB members selected? Access to the drinking water - how do you get drinking water? How are prices set? Are they affordable?

How has the water facility affected you and your household? What difference in livelihood before and after the installation of the water facilities have observed? (Health, time wise, work, etc.).

Major constraints in the water supply system.

#### *Farmers and fishermen*

General: Collective action - which are the water management activities that need collective action? How are they organised? What are the common interests that brought you together? How many are you in a group? Support - source and nature of support (cash, inputs, education).

Rules and regulations - What are the rules? How are they made and who makes them? Sanctions - what happens to defaulters? Leaders - how are the leaders selected? What are their responsibilities? How accountable are they? Contributions: Do you make contributions to the group, what is the nature (dues and fees)?

Constraints in the farming or fishing activities.

Farmers: Irrigation arrangement - source of water; what is the mechanism used in irrigation? Acquisition of land, credit, and other inputs (seeds, fertilisers, insecticide etc.) Mode of payment for services and materials.

Fishermen: State of water resource. Rules and regulations for protecting the Lake – How are activities (fishing) regulated. How do you relate to the traditional authorities, government agencies (which ones)?

Problems encountered.

**Appendix II: The Objectives of the International Conference on Popular Participation in the Recovery and Development Process in Africa**

- a) Recognize the role of people's participation in Africa's recovery and development efforts;
- b) Sensitize national governments and the international community to the dimensions, dynamics, processes and potential of a development approach rooted in popular initiatives and self-reliant efforts;
- c) Identify obstacles to people's participation in development and define appropriate approaches to the promotion of popular participation in policy formulation, planning, implementation, monitoring and evaluation of development programmes;
- d) Recommend actions to be taken by Governments, the United Nations system as well as the public and private donor agencies in building an enabling environment for authentic popular participation in the development process and encourage people and their organisations to undertake self-reliant development initiatives;
- e) Facilitate the exchange of information, experience and knowledge for mutual support among people and their organisations; and
- f) Propose indicators for the monitoring of progress in facilitating people's participation in Africa's development.

Source: African Charter for Popular Participation in Development and Transformation, Arusha, (1990: 3).

### Appendix III: Departments under Metropolitan, Municipal and District Assemblies

Metropolitan	Municipal	District
1. Central Administration Department.	1. Central Administration Department	1. Central Administration Department.
2. Finance Department	2. Finance Department	2. Finance Department
3. Education, Youth and Sports Department.	3. Education, Youth and Sports Department.	3. Education, Youth and Sports Department
4. Metropolitan Health Department	4. Municipal Health Department	4. District Health Department
5. Waste Management Department	5. Agriculture Department	5. Agriculture Department
6. Agriculture Department	6. Physical Planning Department	6. Physical Planning Department
7. Physical Planning Department	7. Social Welfare and Community	7. Social Welfare and Development Department
8. Social Welfare and Community	8. Natural Resources Conservation Department	8. Natural Resources Department - Forestry, Game and Wildlife Division
9. Natural Resources Conservation Department, Forestry, Game and Wild-life Division.	9. Works Department	9. Works Department
10. Works Department	10. Industry and Trade Department	10. Industry and Trade Department
11. Industry and Trade Department	11. Transport Department	11. Disaster Prevention Department
12. Budget and Rating	12. Disaster Prevention Department	
13. Legal Department	13. Urban Roads	
14. Transport Department		
15. Disaster Prevention Department		
16. Urban Roads		

Source: Local Government Act 462, 1993, Section 38, First Schedule.

## Appendix IV: Ecological Monitoring Information Form for Basin Boards

**WATER RESOURCES COMMISSION**  
**ECOLOGICAL MONITORING INFORMATION FORM**

**A. General Information**

Date:	
Season	
Name of river	
Segment of river	
Classification of water body e.g. Main water body, Tributary	

**B. Assessment of Environment**

Parameter	Site 1	Site 2	Site 3	Site 4	Site 5	Remarks/ Suggestions/ Recommendations
Location/ Time of day:						
Weather Condition						
Type of Vegetative Cover						
Animals (Fauna) Present						
Land Use						
Environmental Degradation – e.g. Erosion, Siltation, Bushfire, Pollution, Overgrazing, etc.						
Waste Management Situation						
Description of water e.g. Turbid, Clear, Flowing, Stagnant etc.						
Describe river bank e.g. List of debris on bank, Presence on insects, birds, reptiles, fish, etc.						
Presence of aquatic weeds. If yes, identify						
Presence of water user(s)						
Existing environmental/ ecological management intervention/strategies e.g. Reforestation, Training etc.						



C. Socioeconomic Assessment

PARAMETER	SITE 1	SITE 2	SITE 3	SITE 4	SITE 5	REMARKS/ SUGGESTIONS/ RECOMMENDATIONS
List of communities dependent on river						
Main livelihood(s) of communities (e.g. List of crops grown)						
Use(s) of river by community						
Disease(s) prevalent in Community/ Locality						

D. Other Observations

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